

Service Manual

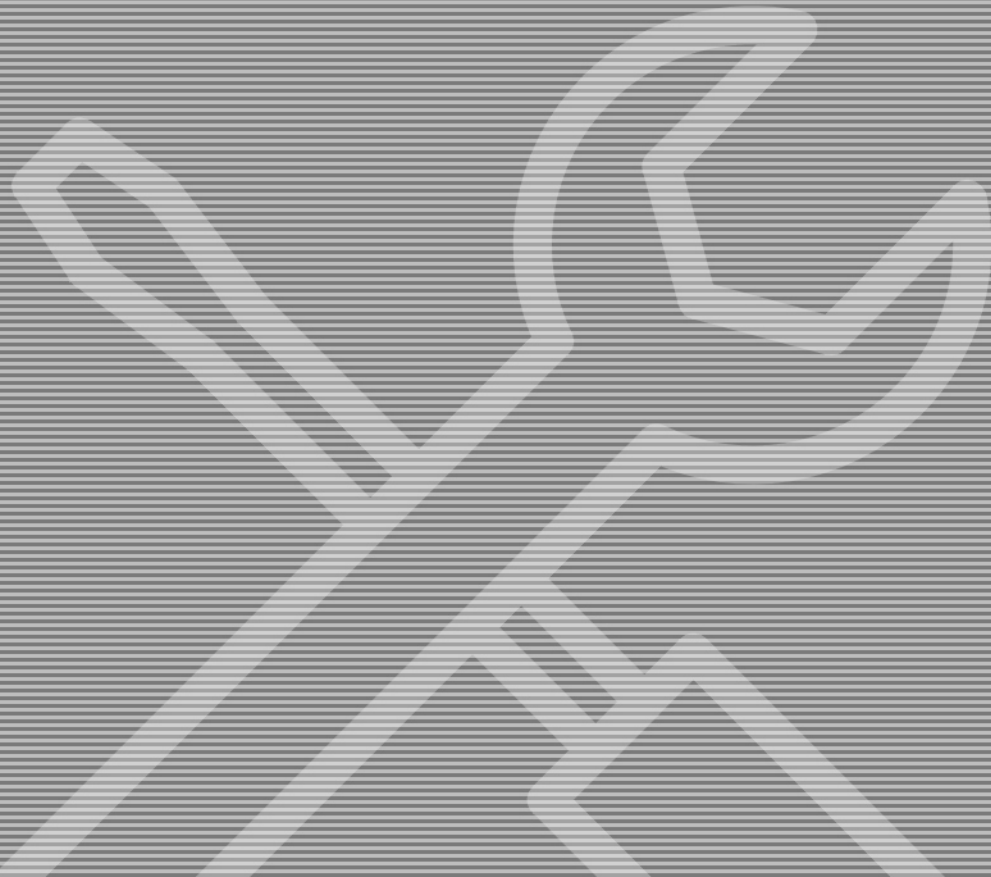


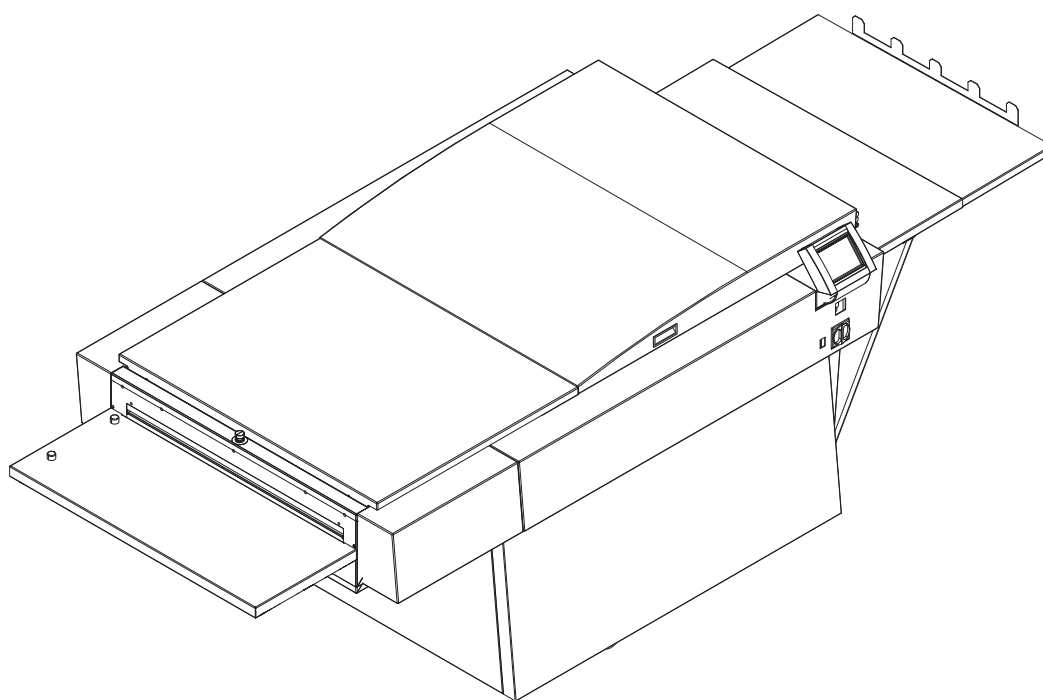
Plate Processor+ 68/85 Polymer

GLUNZ & JENSEN 

GLUNZ & JENSEN

Service manual

Plate Processor+ 68/85 Polymer



Edition BA, November 2012
This book has part No. 10061362



This manual is for Service Technicians only.

The directions given must not be followed by unauthorized personnel.

Always read the *Safety Instruction Manual part No 21741* before installing or operating the equipment.

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Part 0: General information

Reservations




- This manual was written and illustrated using the best possible information available at the time of publication.
- Any differences between this manual and the equipment reflect improvements introduced after the publication of the manual.
- Changes, technical inaccuracies and typographic errors will be corrected in subsequent editions.
- As a part of our policy of continuous improvement, we reserve the right to alter design and specifications without further notice.

Notes, cautions, and warnings !

Throughout the manual notes, cautions, and warnings are written in bold like the example below:



Always replace a fuse with one of the same size and rating as the old one.

Symbol	Meaning	Explanation
	Note	The operator should observe and/or act according to the information in order to obtain the best possible function of the equipment.
	Caution	The operator must observe and/or act according to the information in order to avoid any mechanical or electrical damage to the equipment.
	Warning	The operator must observe and/or act according to the information in order to avoid any personal injury.

Other manuals

Please see description of "Manuals available for the plate processor" later in this chapter.

The processor

Approvals

- Approvals will appear from the labels attached to the name plate or the frame part of the processor.

Unintended use of the equipment

Glunz & Jensen A/S do not take any responsibility for any damage or accidents caused by unintended use of the equipment:

- As the equipment is certified by accredited test laboratory (UL International Demko A/S) it is absolutely prohibited to make any modifications, electrical nor mechanical, of the equipment. If however this prohibition is disregarded, Glunz & Jensen's warranty will no longer apply and the certification labels for UL, C-UL, and CE certification of the equipment shall be removed as the certification will no longer apply to the equipment.

Intended use of the equipment

- Development of photographic materials as specified in "Technical specifications" in Part 1 in this manual.

Installation

- Never install the processor in explosive environments.
- It is the responsibility of the owner and operator/s of this processor that the installation is made in accordance with local regulations, and by engineers authorized to carry out plumbing and electrical installations.
- Installation, service and repair must be performed only by service technicians who are trained in servicing the equipment. The installation procedure is described later in this manual.
- The manufacturer cannot be held responsible for any damage caused by incorrect installation of this processor.
- The processor is intended for installation in a restricted access location only.

Technical data

- Observe technical data from the processor name plate and from Part 1 in this manual.

Chemicals

- It is the responsibility of the owner of this equipment that data is available concerning possible health risk from the chemicals used with the equipment.

"End of lifetime" disposal

The equipment is designed for easy disassembling. All disposal of parts from the machine must be made according to local regulations with special regards to following parts:

- For recycling purposes significant components are marked with material specification according to the ISO 11469 standard.
- PVC, tank etc., must be sent to a waste deposit with recycling in view. Alternatively the PVC can be incinerated at a suitable incinerating plant.
- PCB's and other electric equipment must be sent to a suitable waste deposit.

Service assistance

- If help is needed to correct any problem with the equipment, please contact your local supplier.

Table of contents

Part 0: General information	0-3
Reservations	0-3
Notes, cautions, and warnings !	0-3
Other manuals	0-3
The processor	0-3
Approvals	0-3
Unintended use of the equipment.	0-4
Intended use of the equipment.	0-4
Installation	0-4
Technical data	0-4
Chemicals	0-4
"End of lifetime" disposal.	0-4
Service assistance	0-5
Table of contents	0-6
Manuals	0-10
Service manuals.	0-10
User manuals	0-11
Part 1: Technical specifications.	1-1
General environmental information	1-1
The processor does not contain	1-1
Plastic parts	1-1
Batteries	1-1
End of life	1-1
Recycling	1-1
Packaging	1-1
Noise emission	1-1
Chemical emissions	1-2
Heat emission	1-2
Mechanical specifications	1-2
Performance	1-2
Tank capacities	1-2
Noise emission	1-3
Temperatures	1-3
Water requirements	1-3
Water consumption	1-3
Weights	1-3
Dimensions	1-4
Electrical specifications	1-5
Power supply.	1-5
Voltage tolerances	1-5
Power consumption	1-5
Noise level	1-6

Part 2: Installation	2-1
Installation hours	2-1
Installation hours for off-line machine:	2-1
Standard installation hours for on-line machine:	2-1
Customer training hours	2-1
Preparing the installation site	2-2
Space requirements	2-2
Power outlet	2-3
Cleaning facilities	2-3
Drain connections	2-3
Environmental requirements	2-3
Unpacking/preparing the processor	2-4
General	2-4
Installation kit	2-4
Transport through narrow doorways	2-4
Removing the fenders and stand panels	2-4
Lifting the processor off the pallet	2-6
Transport security items	2-6
Leveling	2-7
Electrical specifications	2-8
Jumper/fuses	2-8
Connecting the main power cable	2-9
Rewiring	2-10
Standard wiring 3W+N+PE, 400 V	2-10
Single phase 2W+PE or 1W+N+PE, 230 V	2-11
Changing from 3W+N+PE to 2W+PE or 1W+N+PE	2-11
Three phase 3W+PE, 230 V	2-12
Changing from 3W+N+PE to 3W+PE	2-12
Power supply units	2-13
LED location on PSU, 225W	2-13
Stacker connection	2-14
Processor/setter connections (ctp online processors)	2-14
Conveyor connection	2-14
Mechanical installation	2-15
Installation of hand shower	2-15
Water connection	2-16
Installing the cooler unit (optional)	2-16
Adjustment of lid switches	2-18
Cleaning the processor tanks	2-19
Mounting of rollers	2-19
Mounting the exit table	2-20
Mounting the feed table	2-20
Installation of level sensors for replenish and waste	2-22
Placing containers	2-23
Mounting fenders	2-24
Mounting filter	2-25
Filling up developer and wash	2-25

Finishing installation	2-26
Mounting panels	2-26
Installation of setter interface	2-26
Initial start-up	2-28
Software service settings	2-29
Configuration and settings	2-29
Calibration of valves and pumps	2-29
Setter interfaces	2-29
Software user settings	2-29
Part 3: Functional description	3-1
General	3-1
Processor sections	3-1
Replenishment/anti-oxidation system	3-5
Top-up replenishment	3-5
Time replenishment	3-5
Off replenishment	3-5
Transport system	3-8
Electronic control	3-9
Master input/output unit (MIO)	3-9
Power control unit (PCU)	3-9
Touch screen control panel (MMI)	3-9
Part 4: Maintenance	4-1
General	4-1
Safety checks	4-2
Electrical	4-2
Mechanical	4-2
Fuses	4-2
Cleaning	4-4
IMPORTANT!	4-4
Cleaning accessories	4-4
Cleaning agents	4-4
Cleaning of developer heating element	4-5
Cleaning of the circulation pumps	4-6
Cleaning of valves in the replenish pumps	4-7
Adjustment of spray tubes	4-7
Cleaning of spray tubes	4-7
Changing filters	4-8
General	4-8
Rollers and brush rollers	4-9
General	4-9
Installation of rollers	4-9
Removing brush rollers	4-10
Installing brush rollers	4-10
Adjusting the brushes	4-11
General	4-11

Processor conditions	4-11
Preparations	4-11
Adjustment - method A	4-11
Adjustment - method B	4-11
Adjustment of gears for wash brush	4-13
Important!	4-13
Procedure of adjustment	4-13
Replacement of bearing bush	4-13
Preventive Maintenance Kit Program	4-15

Part 5: Trouble shooting 5-1

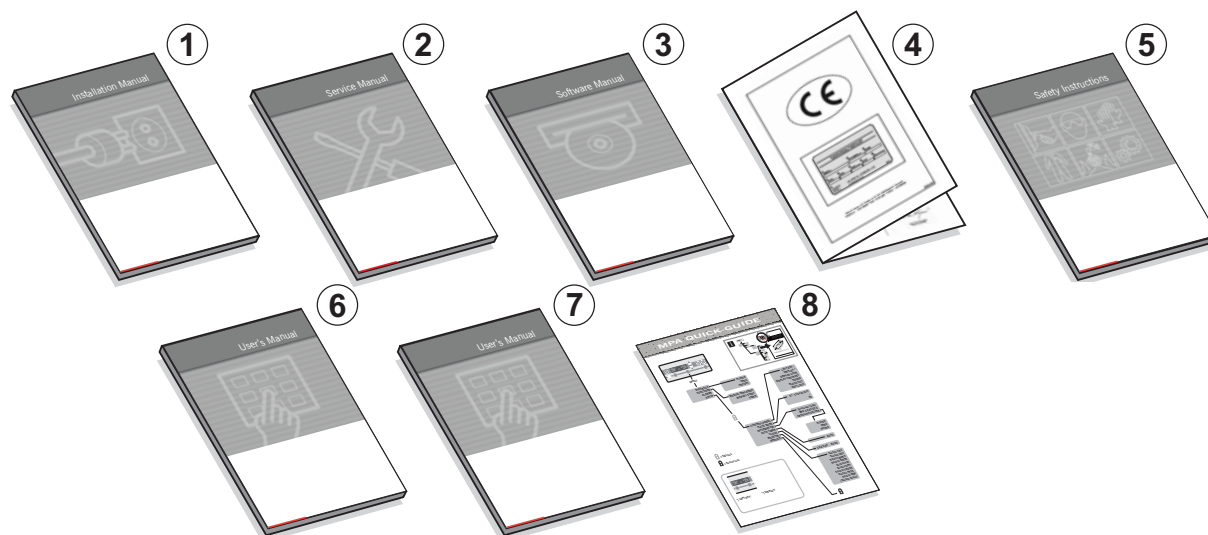
General	5-1
Before starting trouble shooting	5-2
Important!	5-2
Problems with the processor	5-2
Problems with processed material	5-4
Appendix A:B1	

Electrical diagrams A1

Main power distribution	A-2
Fuse panel and interlocks	A-2
Motors and internal bus wiring	A-4
24V DC distribution	A-4
Primary wiring	A-6
230V AC control devices	A-6
Low voltage wiring	A-8
Sensors and control devices	A-8

Manuals

A complete set of manuals consists of the following:



Service manuals

The manuals listed below are for service technicians only. In addition the service technicians will need the manuals listed opposite as "User Manuals".

Processor Service Manual (1)

Language: English
Contents: Installation of the processor
Technical specifications
Functional description
Maintenance
Trouble shooting
Electrical diagrams

Processor Spare Parts Manual (2)

Language: English
Contents: Spare parts

Software Service Information (3)

Language: English
Contents: Menu structure (service menus)
Control Panel, Service Information
Calibration Procedures

User manuals

User manuals available for the processor:

CE Declaration of Conformity (4)

Language: Various

Contents: Survey of the directives to which the products conform

Safety Instruction Manual (5)

Language: Various

Contents: General Safety Information

Processor User Manual (6)

Language: 4

Contents: Operating and cleaning procedures in cartoon version.

Control Panel (user manual) (7)

Contents: Functional description
Menu structure (user available)
Operation and programming
Alarm list

Quick Guide (8)

Language: English

Contents: Survey of Control Panel User Functions

Keep the manuals with the machine for reference at all times.

Part 1: Technical specifications

General environmental information

The processor does not contain

- Ozone depleting substances according to Montreal protocol,
- Asbestos,
- Polychlorinated biphenyl or Poly- Cyclohexylenedimethylene Terephthalate,
- Mercury,
- Cadmium,
- Lead as additive to plastic parts.

Plastic parts

Plastic parts >50g are marked according to ISO 11469.

Batteries

No batteries in this equipment.

End of life

Estimated product life:	10 years
Spare parts and service period:	7 years after last sales.

Recycling

The processor should be disposed at a certified appliance recycling centre or processing centre.
Recycling Passport with specifications of components and materials used in this processor is available on www.glunz-jensen.com/support.

Packaging

Plastic packaging materials are marked according to ISO 11469.

Noise emission

Acoustical noise according to ISO 11201:1996

Sound pressure level	
Operational mode:	63.5 dB
Stand-by mode:	48 dB

Chemical emissions

Ozone:	0 mg/m ³
Dust:	0 mg/m ³
Styrene:	0 mg/m ³

Heat emission

Stand-by:	1200 W (4000 BTU/hour)
Process:	3600 W (12000 BTU/hour)
Maximum:	5000 W (17000 BTU/hour)

Mechanical specifications

Performance

	68	85
Plate types	polymer offset plates	
Plate width min.- max.	200 - 675 mm (7.9 - 26.6")	200 - 850 mm (7.9 - 33.5")
Plate length min.- max.	274 - 1100 mm (10.8 - 43.3")	274 - 1100 mm (10.8 - 43.3")
Plate thickness min.- max.	0.15 - 0.30 mm (0.006 - 0.012")	0.15 - 0.30 mm (0.006 - 0.012")
Plate speed	40 - 140 cm/min (15.7 - 55.1"/min)	40 - 140 cm/min (15.7 - 55.1"/min)
Brush speed at 50 Hz at 60 Hz	60 - 150 rpm	

Tank capacities

	68	85
Prewash	10.5 l (2.8 US gal.)	13.0 l (3.5 US gal.)
Developer, total ex. filter, pumps etc.	17.0 l (4.5 US gal.)	22.0 l (5.8 US gal.)
Wash ex. filter, pumps etc.	11.0 l (2.9 US gal.)	13.5 l (3.6 US gal.)

Noise emission

	68	85
Noise emission max.	63.5dB	

Temperatures

	68	85
Developer min. - max.	20 - 40 °C (68 - 104 °F)	
Dryer, process min. - max.	35 - 55 °C (95 - 131 °F)	
Pre-heat min. - max.	70 - 145 °C (158 - 293 °F)	

Water requirements

	68	85
Pressure	>2 bar (29 psi)	

Water consumption

	68	85
Operation (if no wash recirculation)	28 l/min (7.4 US gal/min)	32 l/min (8.4 US gal/min)
Stand-by (if no wash recirculation)	0.0 l/min (0.0 US gal/min)	0.0 l/min (0.0 US gal/min)

Weights

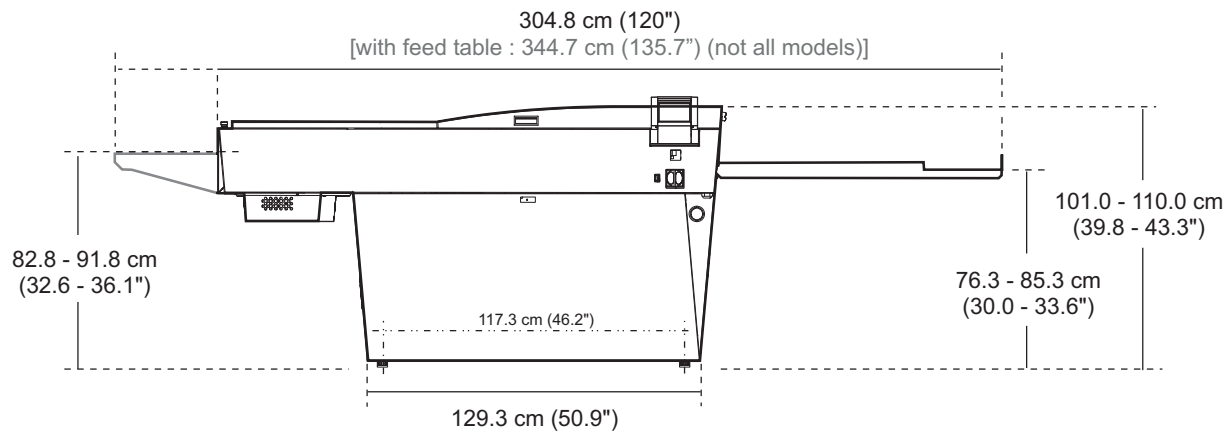
Processor type	68	85
Weight, empty	265 kg (584 lbs)	307 kg (677 lbs)
Weight, shipping	370 kg (816 lbs)	430 kg (948 lbs)
Weight, with liquids	approx. 300 kg (650 lbs)	approx. 350 kg (750 lbs)

Dimensions

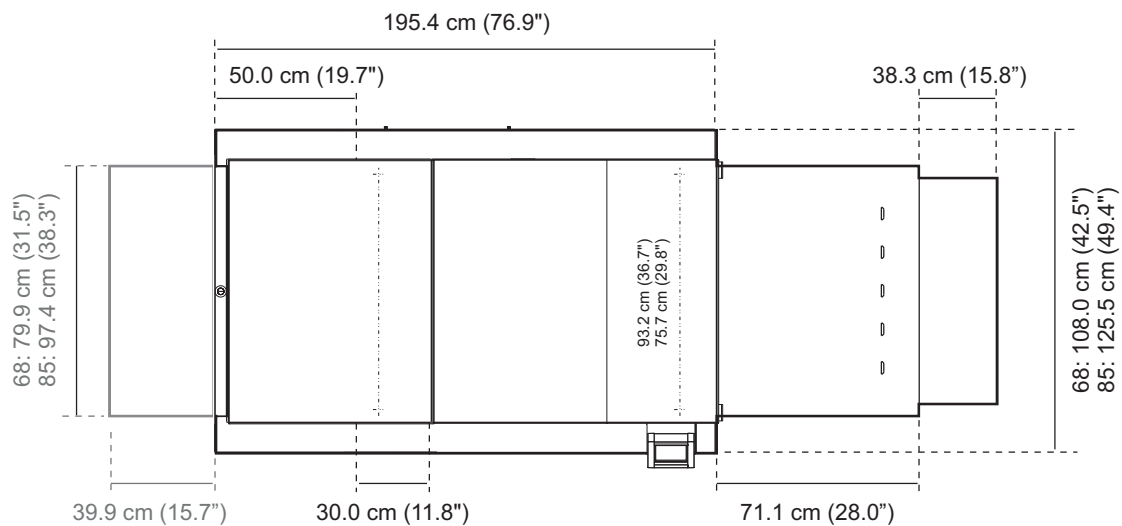
The processor dimensions are specified in the following illustration.

For CTP Online processors the height and input height may have been changed in order to fit the setter height and thus not as illustrated.

Side view



Top view



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Electrical specifications

Power supply



The requirements below are specifications for preparing the installation protection. It is important to prepare the fuses/circuit breakers with adequate capacity as specified here.



Specifications on the processor's name plate is the actual input current and will thus not be identical to below mentioned.

	Supply/fuse	Recommended cable type	68	85
EUR	1W + N + PE, 230 VAC, 1 x 22 Amps, 50/60 Hz	Min. 3 x 2.5 mm ² , type H05 RNF	•	•
	3W + N + PE, 400 VAC, 3 x 10 Amps, 50/60 Hz	Min. 5 x 1.5 mm ² , type H07 RNF	•	•
US	2W + PE, 230 VAC, 1 x 22 Amps, 50/60 Hz	Min. 3 x 10 AWG, type SJO	•	•
	3W + PE, 230 VAC, 3 x 15 Amps, 50/60 Hz	Min. 4 x 12 AWG, type SJO	•	•
JAP	2W + PE, 200 VAC, 1 x 20 Amps, 50/60 Hz	Min. 3 x 12 AWG, (Japanese harmonized power cord)	•	•
	3W + PE, 200 VAC, 3 x 13 Amps, 50/60 Hz	Min. 4 x 14 AWG, (Japanese harmonized power cord)	•	•

Voltage tolerances

All	Voltage tolerance ± 10%	•	•
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Please be aware of double pole/neutral fusing.

Power consumption

	Max. power consumption at ...	68	85
EUR/ US/ JAP	230 VAC operation: 3600 W (12000 BTU/hour)	•	•
	Stand-by: 1200 W (4000 BTU/hour)	•	•
	Maximum: 5000 W (17000 BTU/hour)	•	•

Noise level

See "General environmental information" on page 1-1.

Part 2: Installation

Installation hours

How many working hours are planned for the installation?

Installation hours for off-line machine:

- Provided the machine is unpacked and will stay in the room and all electrical, water and drain installations are in place, the estimated installation time is 4 – 5 hours .
- If the machine must be disassembled to get into the room before installation add another 4 - 5 hours for disassembling and reassembling.
- Unpacking and transportation from pallet to the floor, add 2 – 3 hours.

Standard installation hours for on-line machine:

- Provided the machine is unpacked and will stay in the room and all electrical, water and drain installations are in place, the estimated installation time, including interface installation and connection to the setter, is 6 – 8 hours.
- If the machine must be disassembled to get into the room before installation add another 4 - 5 hours for disassembling and reassembling.
- Unpacking and transportation from pallet to the floor, add 2 – 3 hours.

Customer training hours

How many working hours are planned for training the customer?

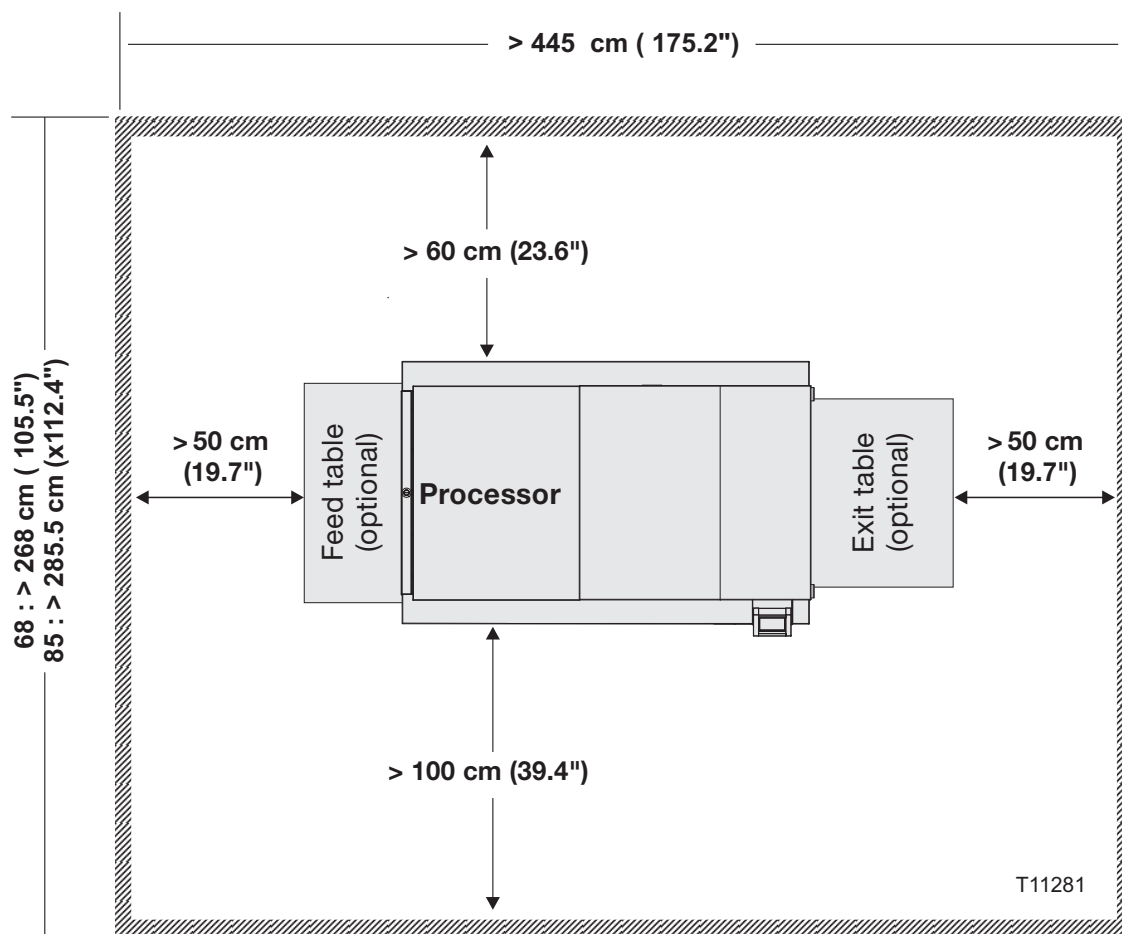
- Introduction and training of the customer (daily user) in normal use of the processor, operating, etc., is estimated to 2 – 3 hours.
- Training of the customer (daily user) in normal daily cleaning and maintenance is estimated to 2 – 3 hours.

Preparing the installation site

Space requirements

Make sure that the free space around the machine at the installation site makes servicing possible.

The recommended minimum free space around the machine is specified in the illustration below.



CTP online

For the CTP On-line processors the space requirements at the processor front has to be decided separately.

Power outlet

If not already there, a main power outlet should be installed in the room, where the machine will be situated. Max. distance to the machine 2 m (6 ft.).

See power outlet and fusing requirements later in this manual.

Cleaning facilities

It is essential to have easy access to a sink and a water tap with hot water where rollers, guides, and brushes can be washed.

The minimum recommended size of the sink is:

68 cm processors: 90 x 40 cm (35.4 x 16"),

85 cm processors: 100 x 40 cm (39.4 x 16").

Drain connections



Never lead drain hoses from the developer section to a drain, as most developers are strong pollutants and it is strictly forbidden to empty this type of chemistry into the public sewer system.



When establishing central reception systems for waste chemicals copper or brass should not be used in the draining system as the chemicals involved are highly corrosive.

Therefor plastic or rubber is recommended.

Check with the chemicals supplier for details.

Environmental requirements

Provide a heating and ventilating system capable of maintaining room temperature between 15 and 25°C (59 and 77°F) and relative humidity on max. 80%.



Capacity of the air condition/ventilation system must be adequate for heat emission of 4000 BTU/hour (1200 Watt) in stand-by and 12000 BTU/hour (3500 Watt) in process.

Unpacking/preparing the processor

General

Carefully unpack the machine and check that all parts are present according to the enclosed packing list and in good condition.

Installation kit

Installation- and spareparts kits are included with the processor. They comprise the different parts necessary to make the installation and some key components as spareparts.

See the packing list(s) delivered with the equipment for further information.

Transport through narrow doorways

Dependent on the width of the door(s) through which the processor has to be transported to the installation site, the Service Technician may have to perform the actions described in the table below:

If width of the doorways are ...

68	85	Then...
> 2140 mm (84.3")	> 2140 mm (84.3")	No action is required as the crated processor can be transported immediately to the installation site.
2140 - 1100 mm (84.3 - 43.3")	2140 - 1270 mm (84.3 - 50")	The Service Technician has to unpack the processor.
< 1100 mm (43.3")	< 1270 mm (50")	The Service Technician has to unpack and strip down the processor.

Removing the fenders and stand panels

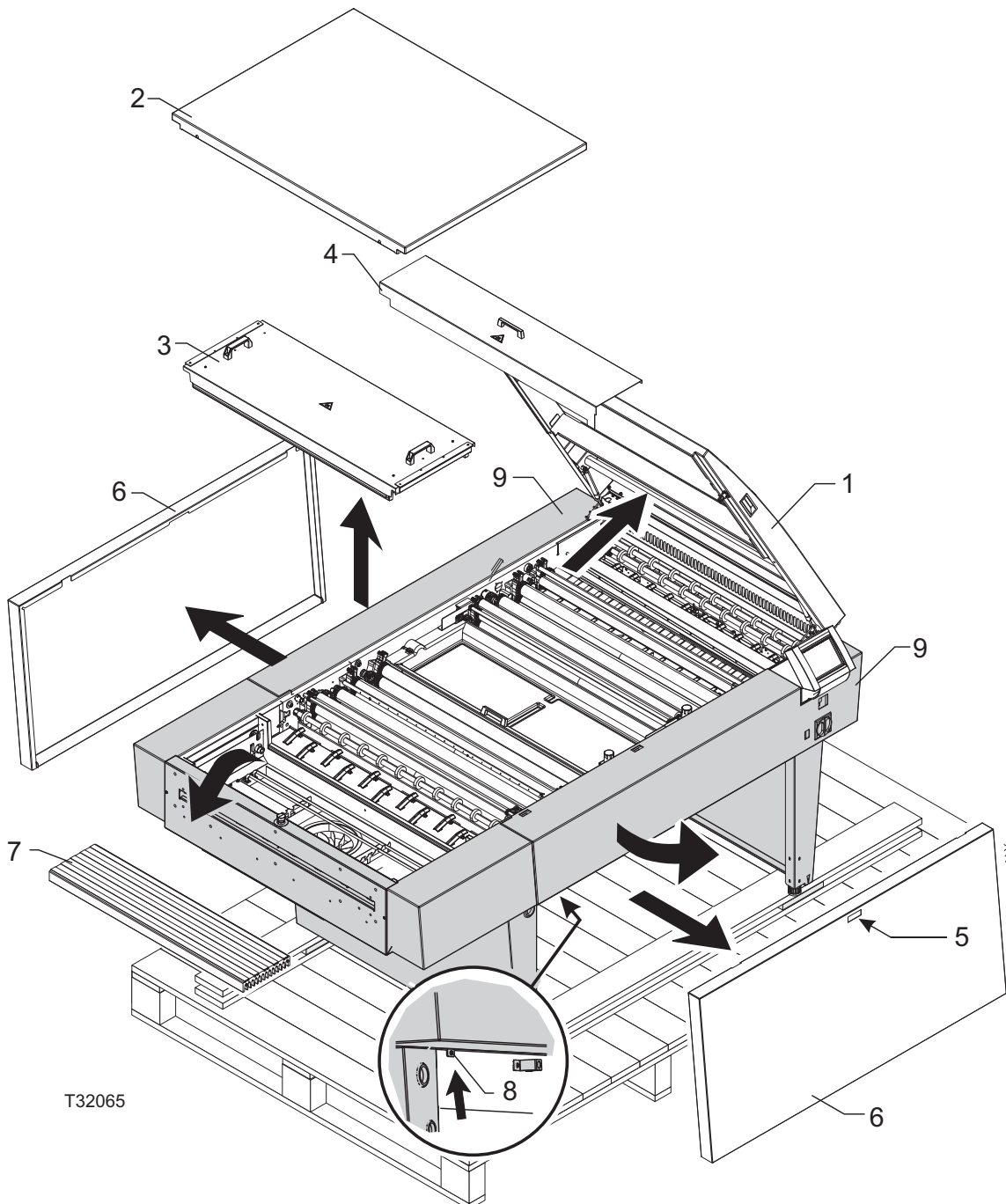
In order to make the installation it will be necessary to remove covers, lids, left fender, and the stand panels from the processor:

(See illustration on the following page.)

- Lift up the top cover (1), remove the pre-heat/pre-wash cover (2), the pre-heat lid (3), and the dryer lid (4).
- Release the locks (5) of the stand panels by pulling them outwards.
- Lift off the panels (6).
- Loosen the 4 screws securing the pre-heat unit (7) and lift the pre-heat unit out of the processor.
- Remove the screws (8) securing the left and right fenders (9) to the stand and lift off the fenders.



Rollers are placed under the processor in separate boxes due to transport security reasons. The boxes need to be removed from the pallet before lifting up the processor from the pallet.



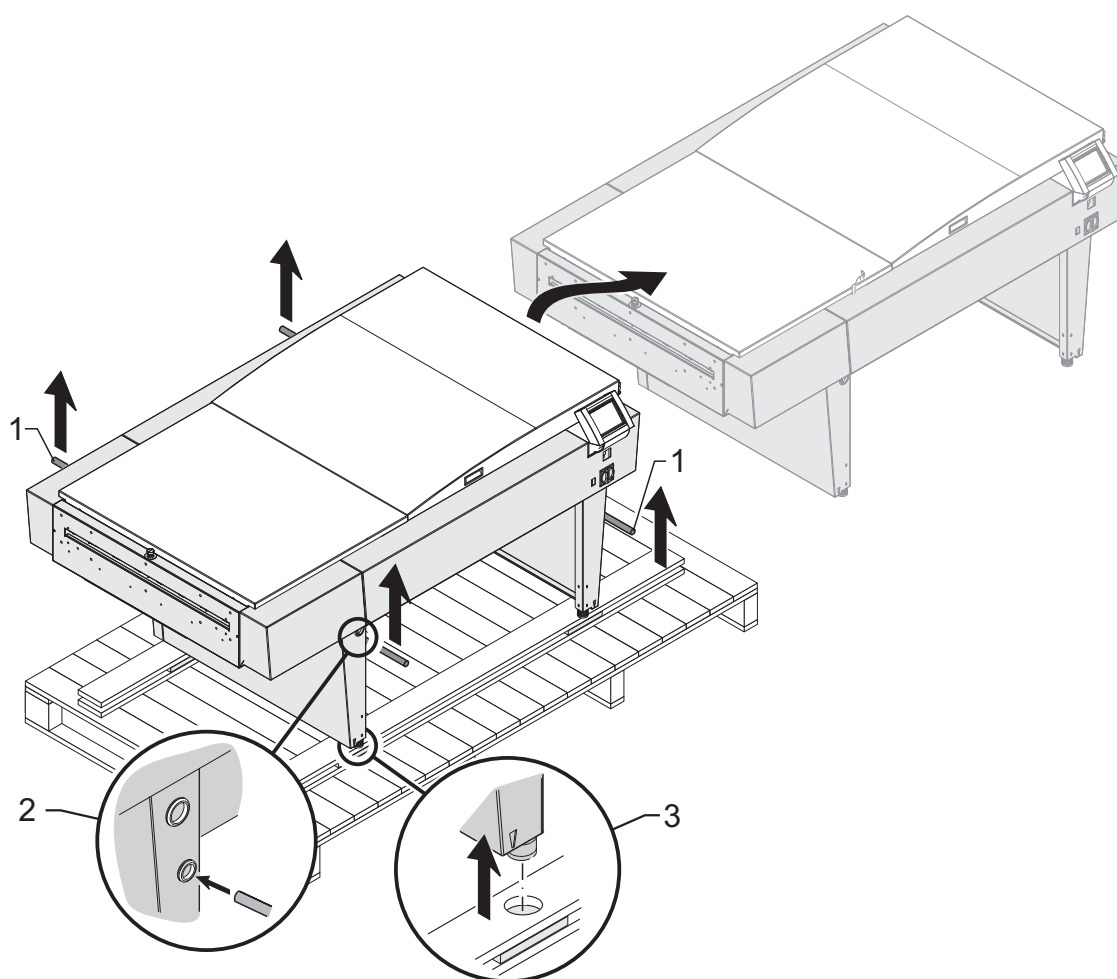
Lifting the processor off the pallet

Four persons are needed for lifting the processor down from the pallet. Alternatively a forklift truck is recommended.

- Two persons are needed on each side of the processor for lifting. Please note that processor without rollers, brushes, and heat sink model 68 weights app. 160 kg (app. 253 lbs), 85 model weights app. 200 kg (app. 441 lbs).
- Mount the two pipe bars (1) enclosed with the processor as shown on the illustration (2).
- The processor legs are placed in holes in the pallet. Make sure to lift the processor out of the holes (3) when lifting it down the pallet.
- Place the processor on the installation site.

Transport security items

During transportation many of the parts outside and inside the processor have been secured using tape, plastic, strips, and various pieces of sponge rubber. Make sure to remove all items.



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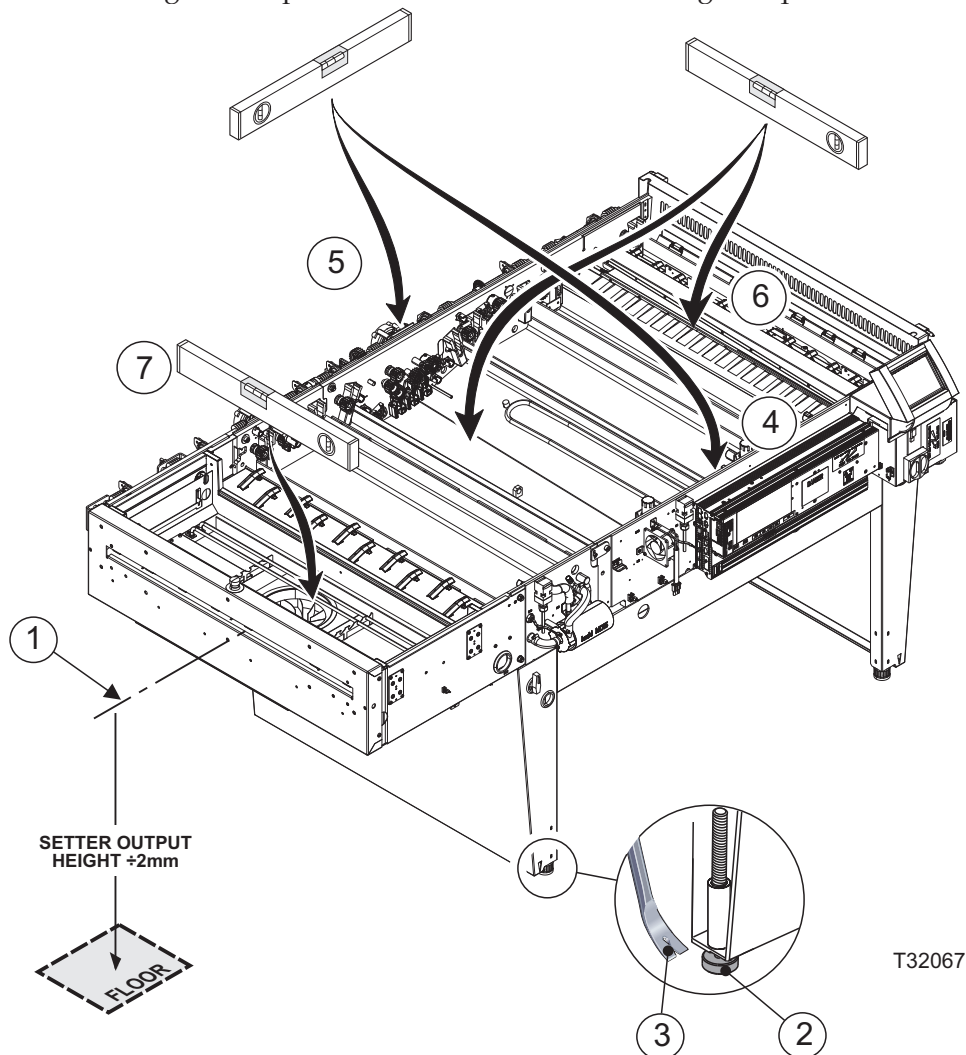
Leveling

i The machine must be placed on a steady surface, so that it does not shake easily and the chemicals cannot be spilled from one section to the other.

Do not rely on the floor being absolutely in level.

h For CTP ONLINE PROCESSORS the final height from floor to bottom of the processor entrance (1) must be: SETTER OUTPUT HEIGHT ± 2 mm

- Use the adjustable feet (2) in the legs to level out the processor. It will be necessary to use ex. a crowbar (3) to lift the legs slightly before being able to turn the feet and counter nuts.
- Level out the processor lengthwise by placing a spirit level on the left (4) and right (5) tank side.
- Level out the processor crosswise by placing the spirit level on the guide (6) at the entrance of the dryer section.
- Level out the processor by placing the spirit level inside the preheat (7), or between the preheat and the prewash tank.
- It is necessary to control the level at the preheat also and adjust if necessary
- Check leveling in all 4 positions and make final leveling if required.



Electrical specifications



The electrical installation must conform to local regulations and guidelines.



The required cable/plug is usually not delivered with the processor.



Please be aware of double pole/neutral fusing.



The processor is Class 1 equipment. It must therefore be connected to earth to avoid electrical shocks.



The fuses must have a breaking capacity of min. 100 kA. If using automatic circuit breakers, make sure they are Type D.

When selecting a cable type take the following into account:

- **Chemical resistance:** Chemicals may leak onto cable
- **Mechanical resistance:** The operator may step onto cable.
- **Additional protection:** Provide for additional cable protection, e.g. cable covers, if cable is exposed to heavier transport such as forklift trucks etc.



The conductors in the power supply cable must be of copper.

Jumper/fuses

The fuse board is located in the electronics cabinet and holds a number of fuses and jumpers which should be either installed or removed depending of the power supply.

	Supply/fuse	68	85
EUR	1W + N + PE, 230 VAC, 1 x 25 Amps, 50/60 Hz	•	•
	3W + N + PE, 400 VAC, 3 x 15 Amps, 50/60 Hz	•	•
US	2W + PE, 230 VAC, 1 x 30 Amps, 50/60 Hz	•	•
	3W + PE, 230 VAC, 3 x 20 Amps, 50/60 Hz	•	•
JAP	2W + PE, 200 VAC, 1 x 20 Amps, 50/60 Hz	•	•
	3W + PE, 200 VAC, 3 x 15 Amps, 50/60 Hz	•	•

Connecting the main power cable

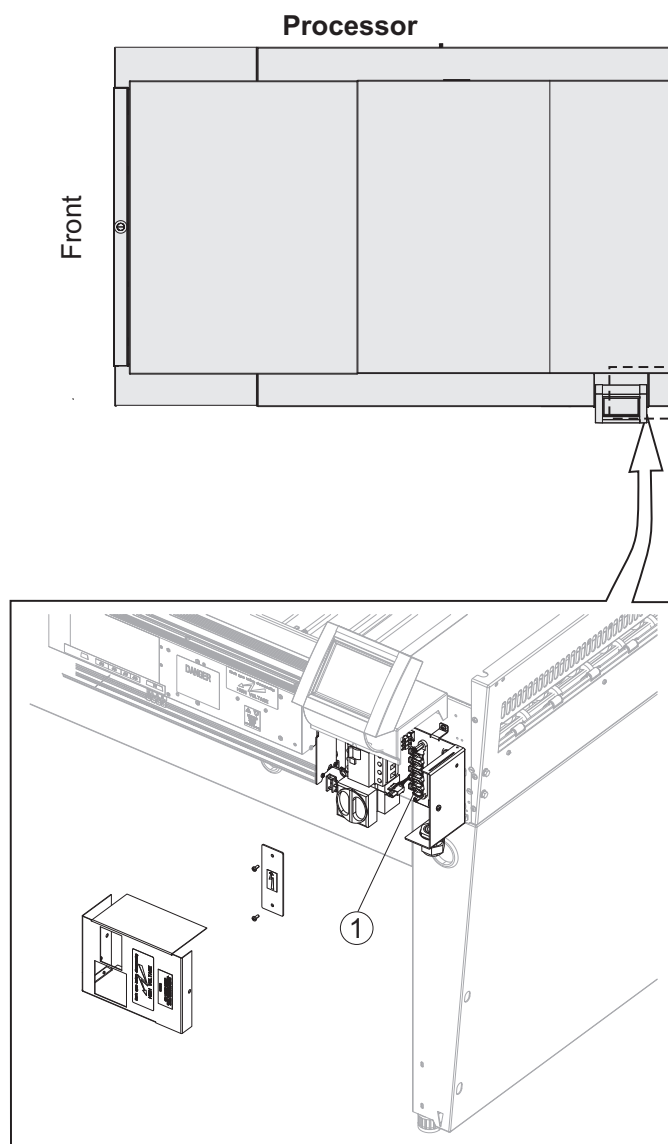
(See illustration below).

The main power connection must be made in the field-wiring box located on the left side of the processor next to the electronic cabinet.



When delivered your processor is wired for 3W+N+PE 400V (EUR-MODELS). Before operating the processor you may need to perform a rewiring to match your local supply voltage.

- Connect the cable to the terminal block (1). Lead the cable as shown below.
- If required, make rewiring as described on the following pages.



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Rewiring

Standard wiring 3W+N+PE, 400 V

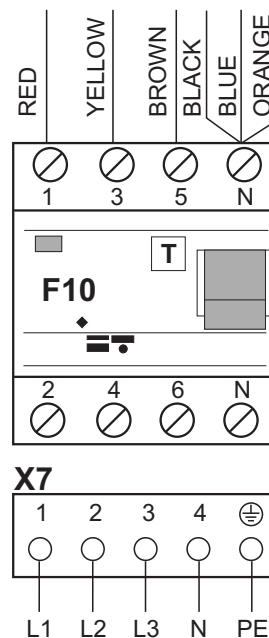
- On arrival the processor is wired as shown opposite. Connect conductors in power cord to terminals:
 - L1: 1
 - L2: 2
 - L3: 3
 - N: 4
- Protective earth: Ground (symbol).



The unit has double pole/neutral fusing.



The unit is fused in the neutral conductor - where, after operation of the fuse, parts of the equipment remain energized. This might represent a hazard during servicing.



T2666

Single phase 2W+PE or 1W+N+PE, 230 V

- Connect conductors in power cord to terminals:
 - L1: 1
 - L2 or N: 3
 - Protective earth: Ground (symbol).

Changing from 3W+N+PE to 2W+PE or 1W+N+PE

This configuration must only be used on Plate Processors without preheat due to the power consumption.

Modification on the Ground Fault Circuit Relay, F10:

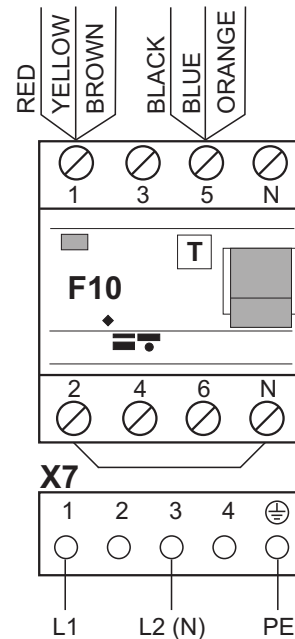
- Loosen screw in terminal 1, 3, 5 and N and remove all wires.
- Mount red, yellow and brown wire in terminal 1.
- Mount black, blue and orange wire in terminal 5.
- Add a jumper (see spare part box) from terminal 2 to N.



The unit has double pole/neutral fusing.



The unit is fused in the neutral conductor - where, after operation of the fuse, parts of the equipment remain energized. This might represent a hazard during servicing.



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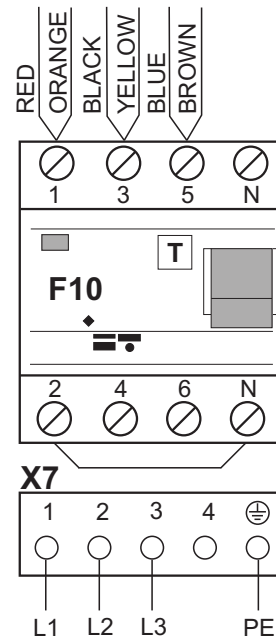
Three phase 3W+PE, 230 V

- Connect conductors in power cord to terminals:
 - L1: 1
 - L2: 2
 - L3: 3
 - Protective earth: Ground (symbol).

Changing from 3W+N+PE to 3W+PE.

Modification on the Ground Fault Circuit Relay, F10:

- Loosen screw in terminal 1, 3, 5 and N and remove all wires.
- Mount red, and orange wire in terminal 1.
- Mount black and yellow wire in terminal 3.
- Mount blue and brown wire in terminal 5.
- Add a jumper (see spare part box) from terminal 2 to N.



T2668



The unit has double pole/neutral fusing.



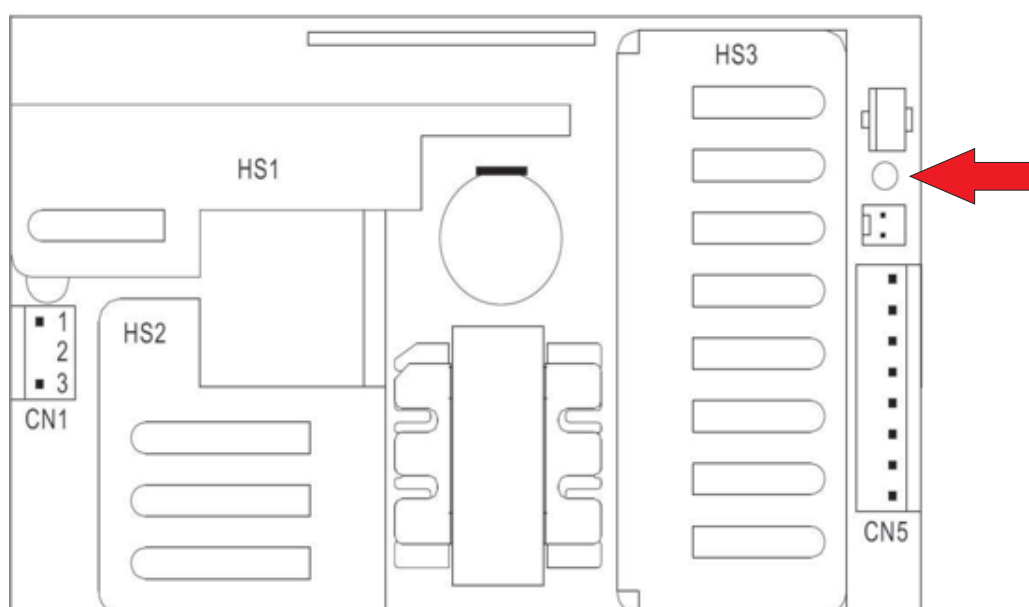
The unit is fused in the neutral conductor - where, after operation of the fuse, parts of the equipment remain energized. This might represent a hazard during servicing.

Power supply units

The Electronics is powered by switching power supply units which incorporate universal AC input in the full voltage range from 90 to 264 V. No adjustments or modifications are available on these units.

- A LED (green light emitting diode) is indicating power on. The LED is located near the 24 Vdc output connector.
- The output is protected by an electronic limiter, which recovers automatically after fault condition is removed.
- The primary AC input is protected by fuse F8 rated 6.3 AT located on the fuse PCB.

LED location on PSU, 225W



Stacker connection

Not all models (accessory equipment).

Cable for connection to a stacker is placed underneath the dryer section.

Unpack the cable and connect it to the stacker (see also the stacker manual).



When the cable is not in use, please reel it and secure the receptacle away from liquid and readily accessible areas.

Processor/setter connections (ctp online processors)



The interface can be either a feed table or a setter interface.

Whether or not the processor is already fitted with some kind of interface panel you should refer to the separate "INTERFACE MANUAL" for installation instructions and other information relevant for your present type of interface.

Conveyor connection

Not all models (accessory equipment). See separate manual.

See the description for stacker connecting above.

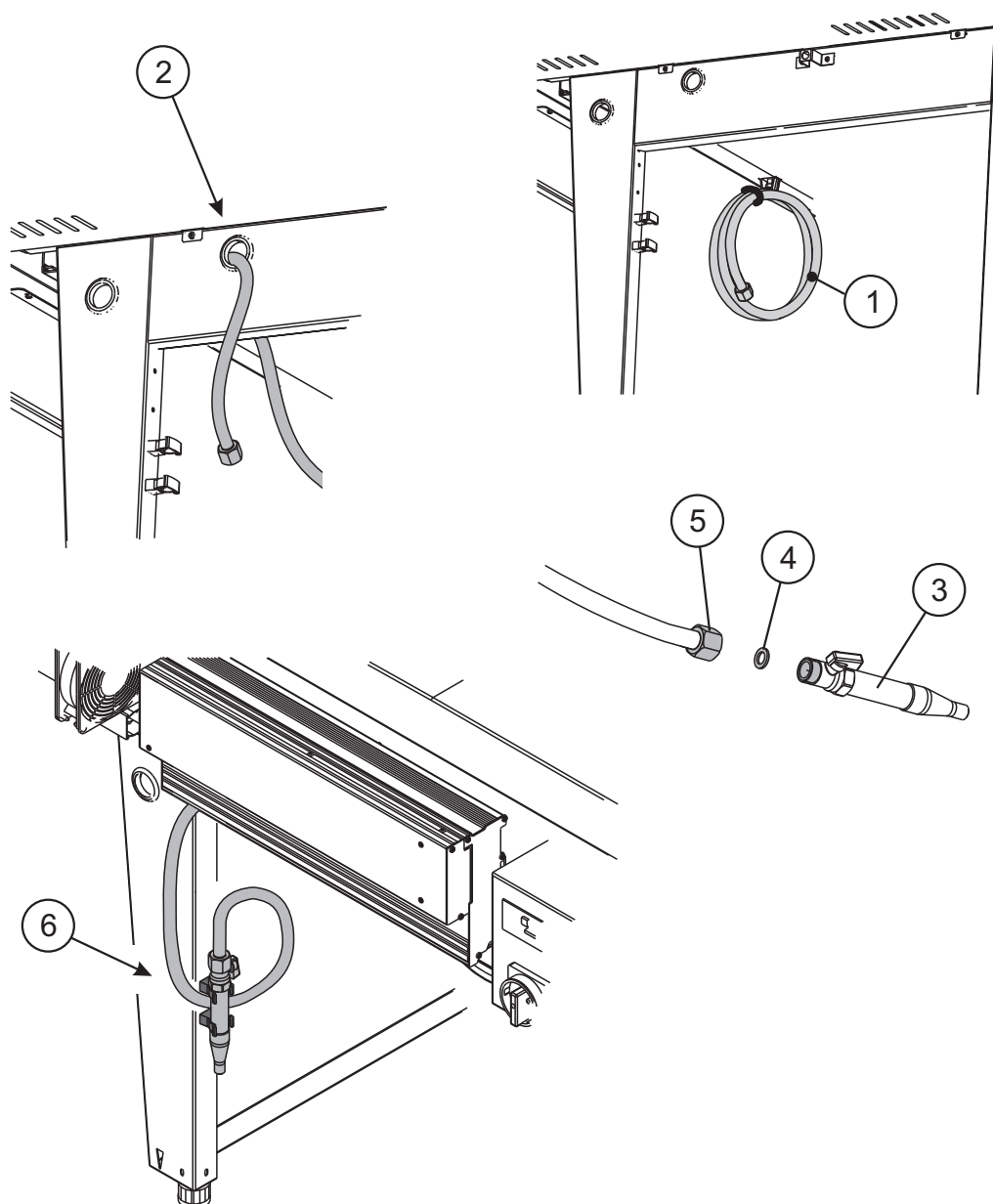
Mechanical installation

Installation of hand shower

i Not all models.

To mount the handshower please follow the description below and the illustration opposite.

- The hose (1) is mounted underneath the processor.
- Pull the hose through the hole in the right side of the front panel (2).
- Mount the shower head (3) and the washer (4) on the hose (5).
- Fix the shower head to the snap locks (6) inside the front panel.

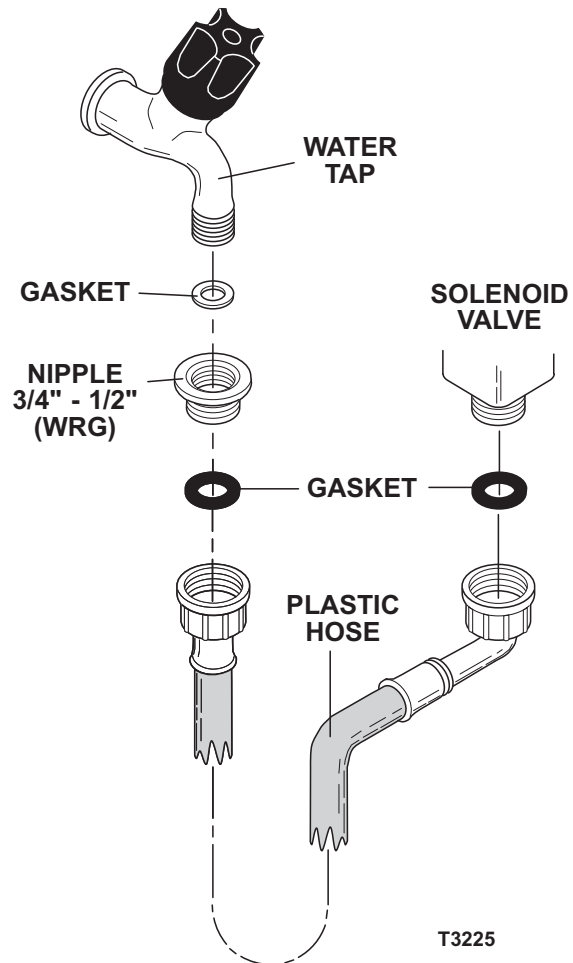


Water connection

The water supply connection is made by means of the plastic hose and the fitting (WRG) delivered with the processor.

As shown in the figure below the hose must be connected between the water tap and the water inlet solenoid valve located to the left, when standing in front of the processor, underneath the processor.

The hose can be connected to a water tap with $\frac{1}{2}$ " or $\frac{3}{4}$ " male thread (WRG). When connecting to $\frac{3}{4}$ ", the reduction nipple shall not be used.

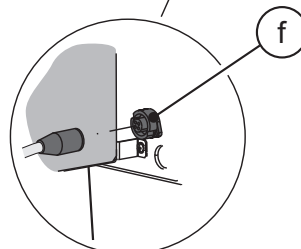
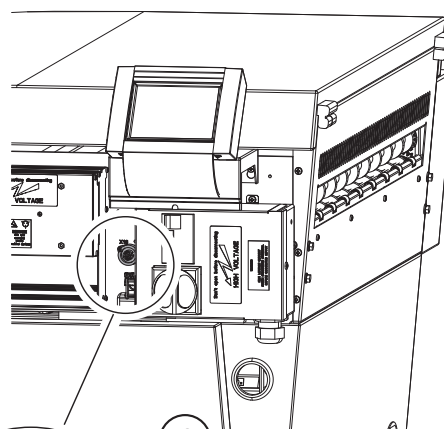
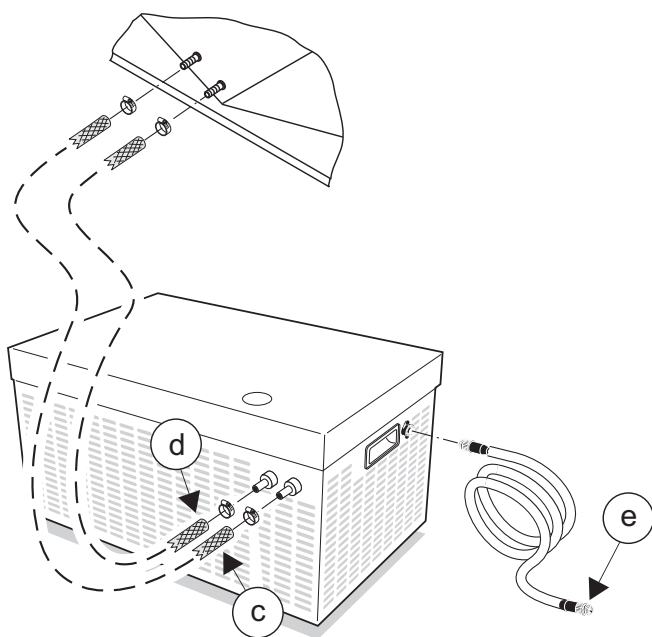
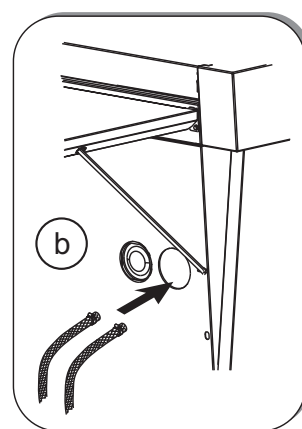
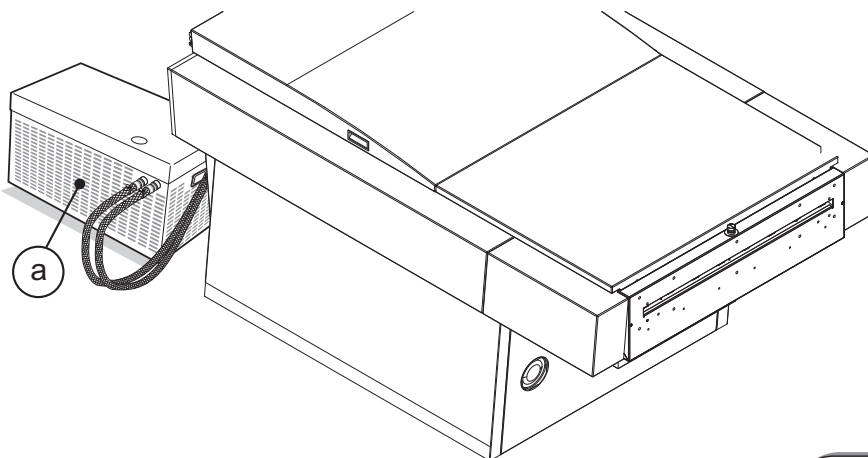


Installing the cooler unit (optional)

An external cooler unit can be connected to the developer section.

- Place the cooler **(a)** behind the processor.
- Lead the hoses from the cooler unit through the hole for hoses **(b)** in the rear panel.
- Connect the cooler hoses **(c)** and **(d)** to the in- and outlets to the left underneath the developer tank.
- Connect the cooler plug **(e)** to the plug **(f)** located next to the main power connection box inside the fender on the right side of the processor.

For more information about the cooling unit please consult the cooler unit manual.

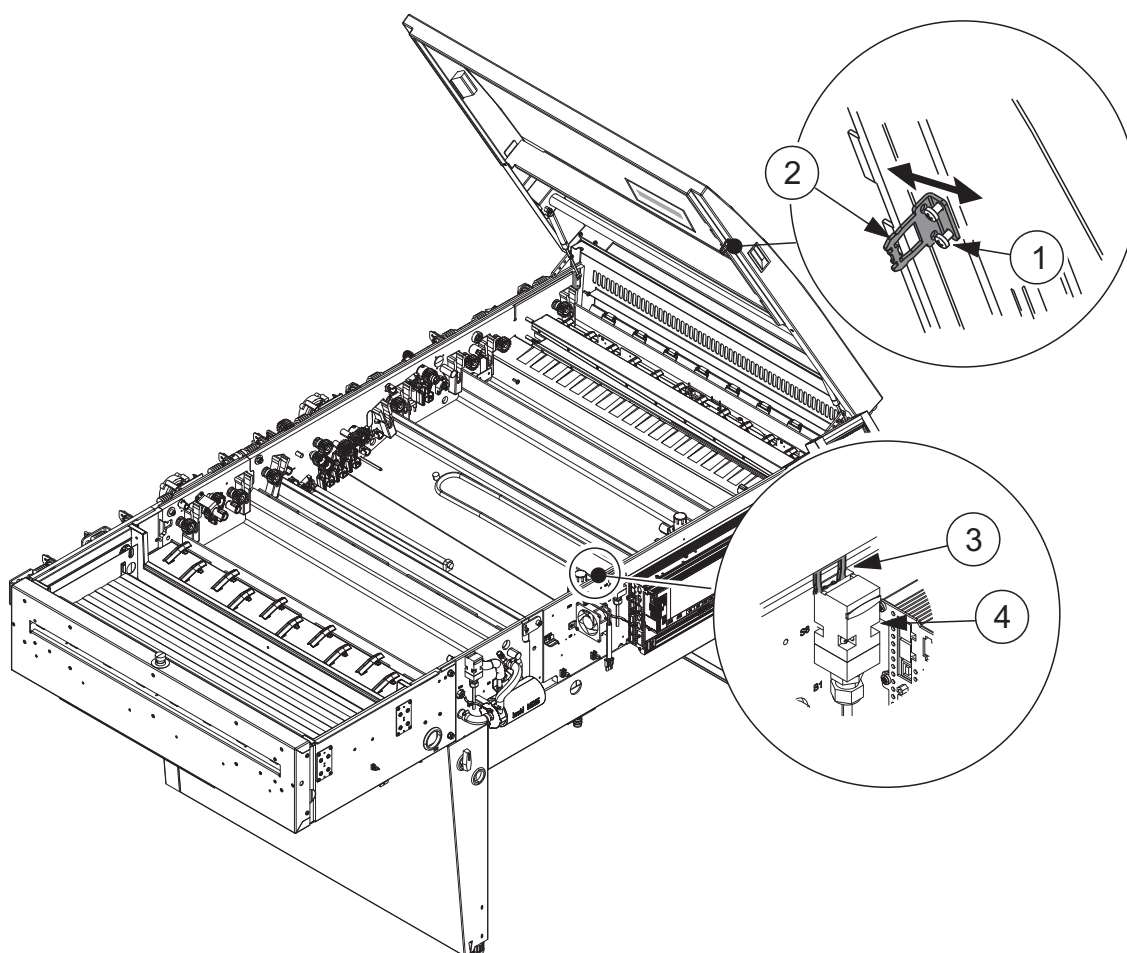


T31537

Adjustment of lid switches

(See illustration below.)

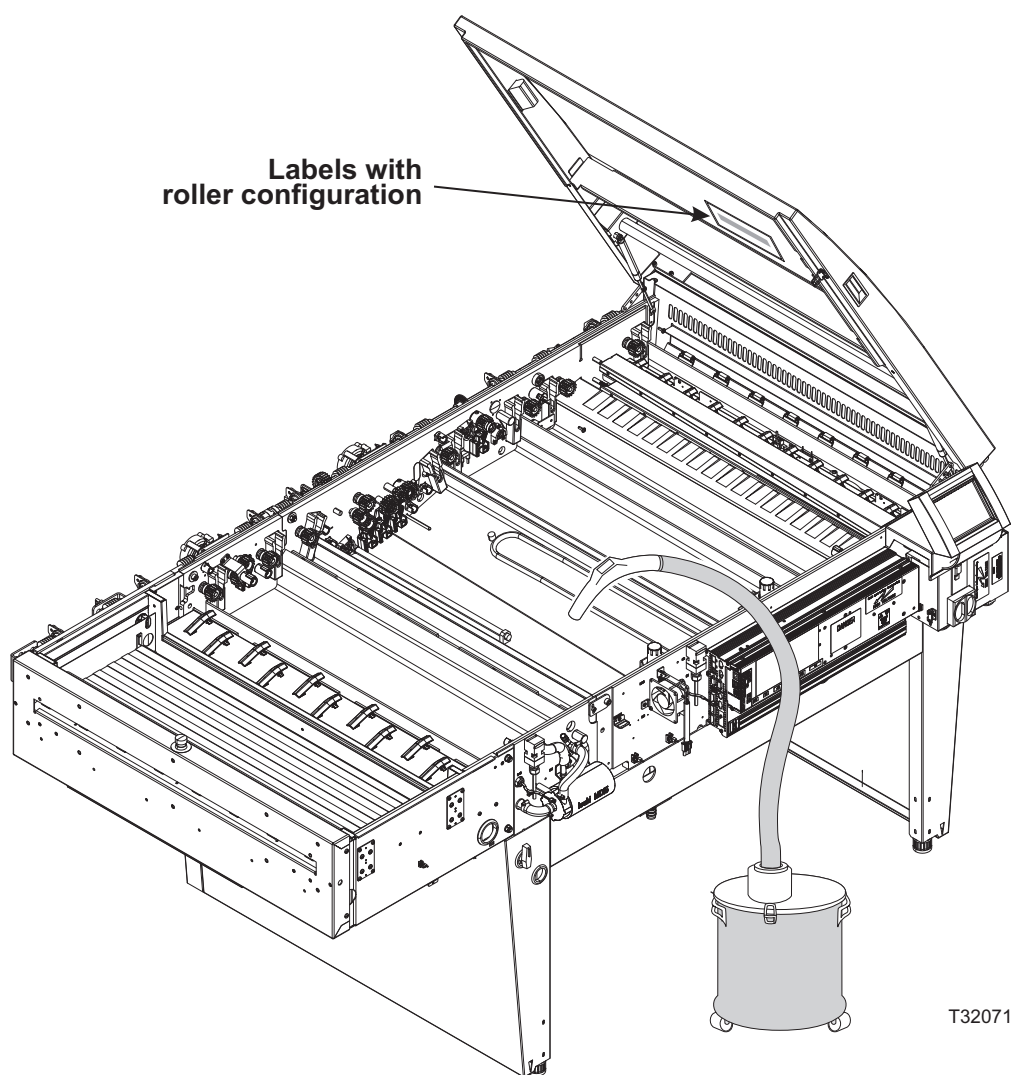
Adjustment of the lid switches may be needed after leveling of the processor.
Loosen the screws **(1)** and adjust the actuator **(2)** sideways until it fits smoothly **(3)** into the switch **(4)**.



T32070

Cleaning the processor tanks

Before installing rollers and covers it is necessary to vacuum clean the tank to remove sponge rubber remains and dust etc.



Mounting of rollers

Inside the top cover is mounted a label showing the roller configuration. Install the rollers as shown on the label.

Install the rollers standing on the left side of the processor.

Delivered with the processor is a tool for installation of brush rollers. Installation and adjustment of brush rollers are described in chapter 3 in the processor service manual.

Mounting the exit table

Some models only.

The exit table is mounted from the factory and prepared for slanted position **(A)**. Follow the description below when mounting the supports for position A.

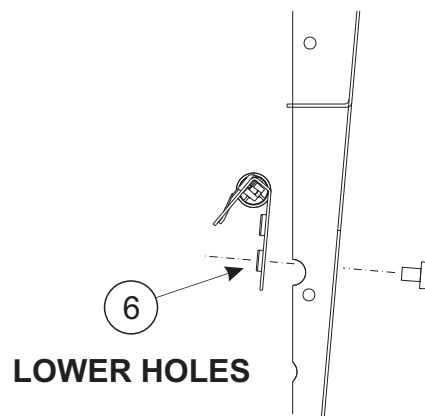
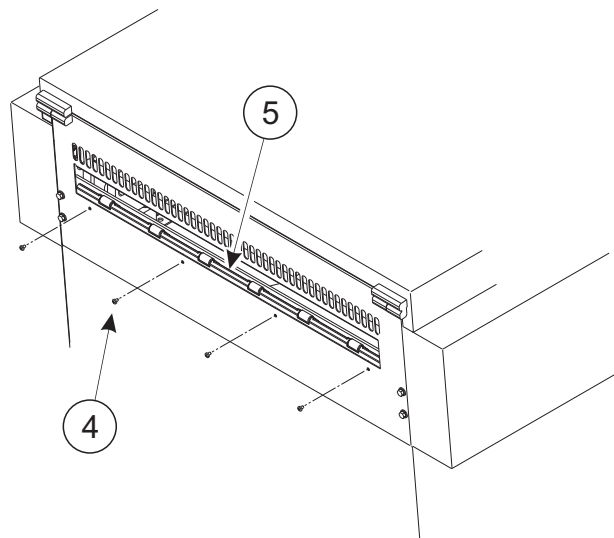
If straight position **(B)** is wanted please follow the description for B.

Slanted position (A)

- Lift the exit table to vertical position **(1)**.
- Mount the supports through the holes in the exit table **(2)**, turn them to lock them inside the holes.
- Lead the supports through the lower holes in the rear panel **(3a)** and secure them inside using the enclosed locking split pins **(3c)**.

Straight position (B)

- Dismount the exit table.
- Dismount the 4 screws **(4)** holding the exit guide **(5)**. **Be careful to hold on to the exit guide when removing the screws. Do not let it slip down behind the rear panel.**
- Move the exit guide a little upwards and mount the 4 screws in the lower holes of the guide **(6)**.
- Mount the exit table.
- Lift the exit table to vertical position **(1)**.
- Mount the supports through the holes in the exit table **(2)**, turn them to lock them inside the holes.
- Lead the supports through the holes in the rear panel **(3b)** and secure them inside using the enclosed locking split pins **(3c)**.

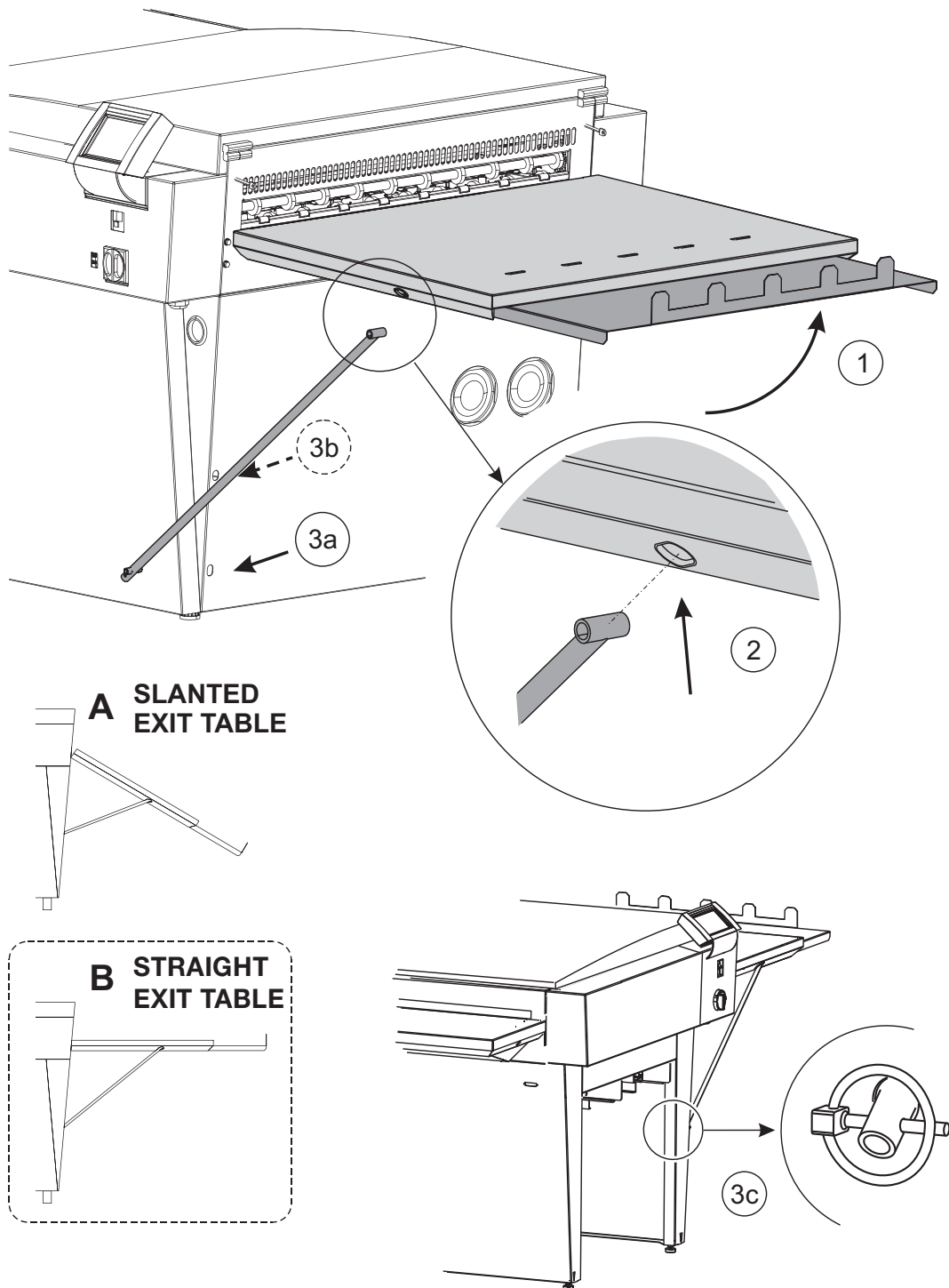


Mounting the feed table

Offline processors only!

Mounting of the feed table is described in the manual for the feed table kit.

T31594



T32072

Installation of level sensors for replenish and waste

Enclosed in the installation kit are 4 sets of level sensor kits for developer waste, developer fill-up, and developer and gum replenishment containers.

Installing level sensor kit requires configuration of replenishment parameters in the software. This is done when installation of the processor has been completed. The parameters to be configured are:

DATA>CONFIGURATION>HARDWARE:

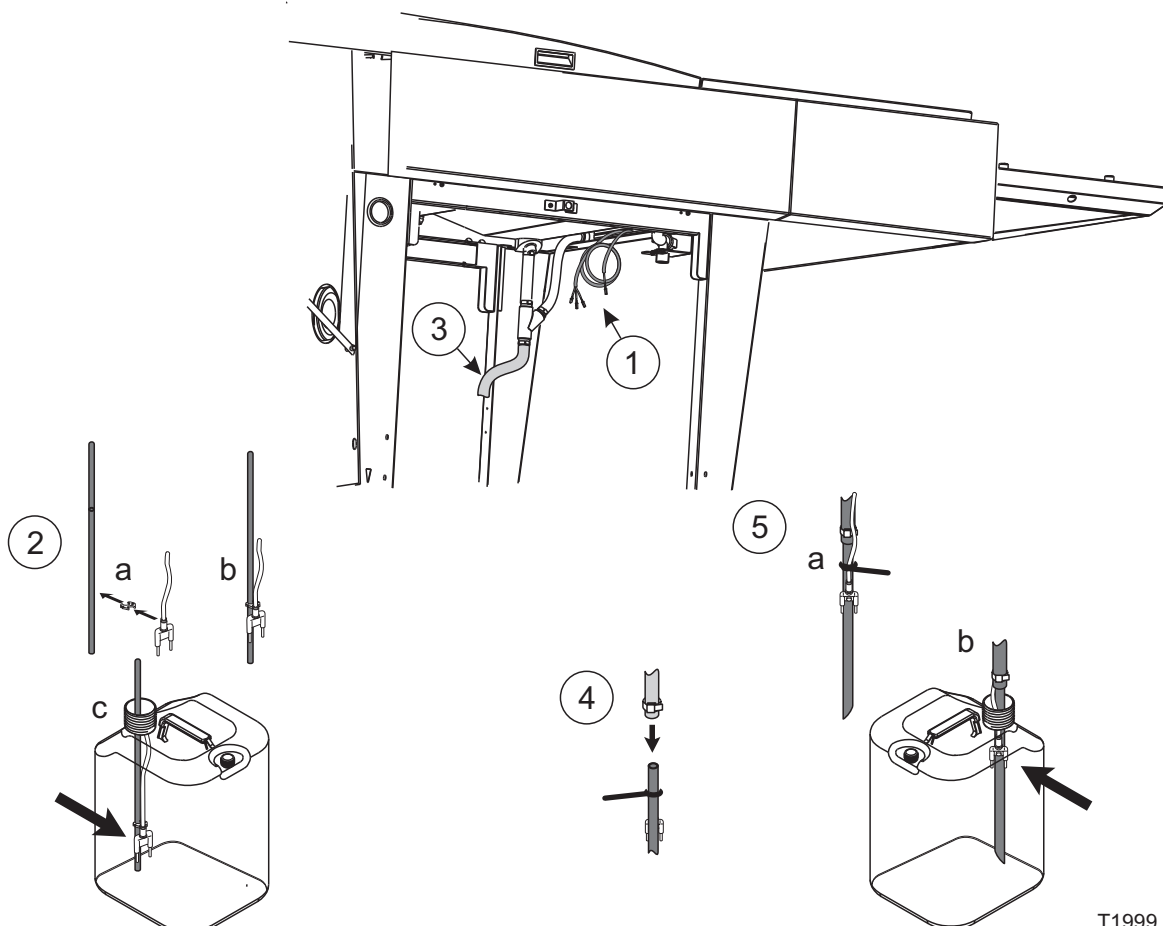
DEVELOPER CONFIGURATION>WASTE FULL LEVEL SENSOR = YES

REPLENISH LOW LEVEL SENSOR = YES

FILL LOW LEVEL SENSOR = YES

GUM CONFIGURATION>CONTAINER LOW LEVEL SENSOR = YES

- Locate the cables for level sensors (1). The cables are marked with name tags for each sensor.
- Connect the enclosed sensor cables and mount sensors as shown on the illustrations:
 - "Dev repl min. cont. B10" to developer replenishment container (2).
 - "Cont. min." to developer fill-up container (2).
 - "Gum min. cont. B9" to gum replenishment container (2).
- Locate the hose for developer waste (3) and mount it to the developer waste tube (4).
- Mount the "Dev. waste max. sensor B15" to developer waste container (5).

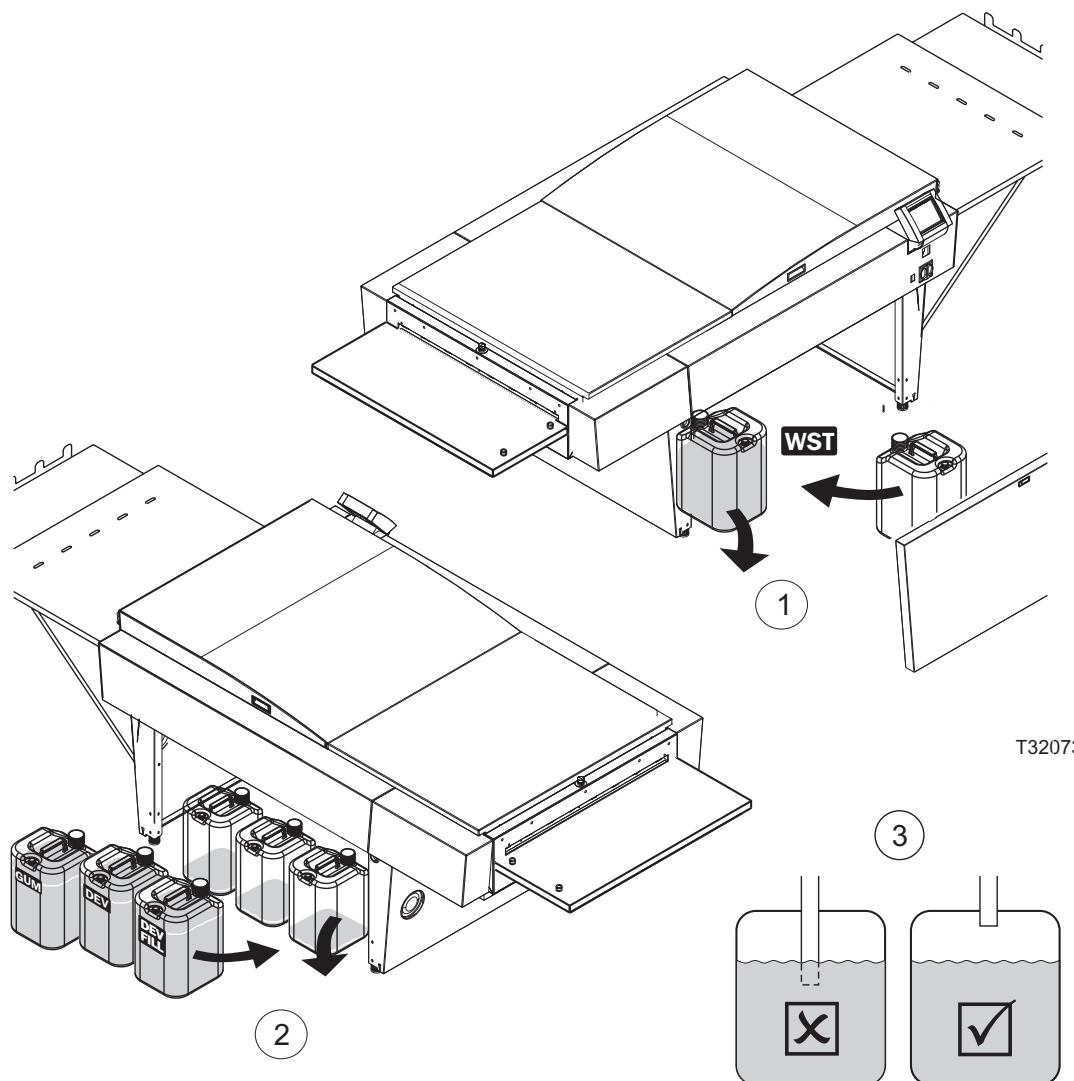


T1999_c8

Placing containers

Place the waste container (1) underneath the processor in the right side, and place the replenishment containers (2) in the left side as shown on the illustration.

i When inserting the gum return hose into the gum container, make sure that the hose end is never below the gum surface (3).

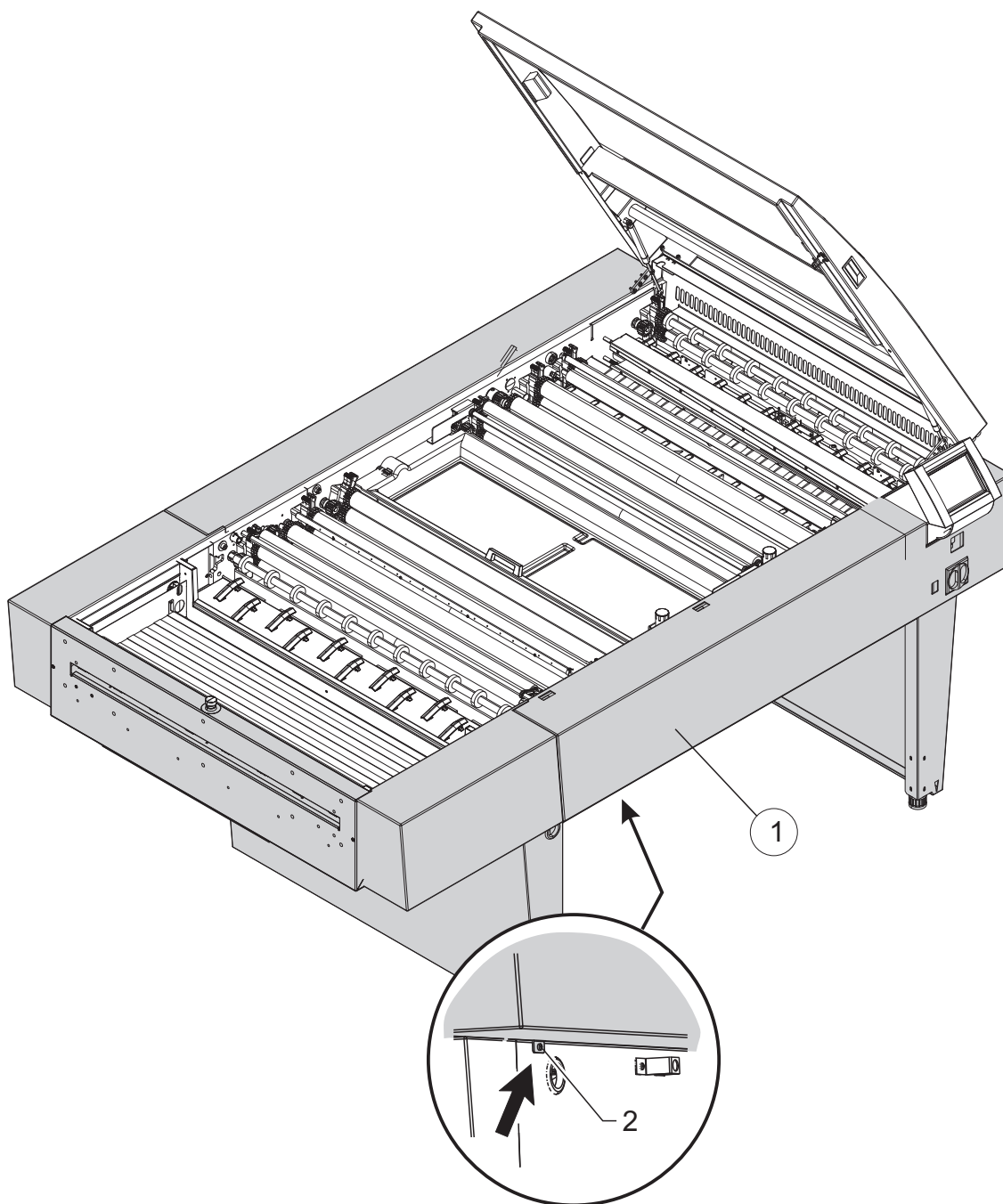


i

GUM	DEV	DEV FILL
Blue	Red	White
Blau	Rot	Wiess
Bleu	Rouge	Blanc
Azul	Rojo	Blanco
Blu	Rosso	Bianco
Μπλε	Κόκκινο	Λευκό
Blauw	Rood	Wit
Sininen	Punainen	Valkoinen
Azul	Vermelho	Branco
Blå	Röd	Vit
Blå	Rød	Hvid
Blå	Rød	Hvit
Blátt	Rautt	Hvitt
Голубой	Красный	Белый

Mounting fenders

- Mount the (1) with the screws (2).

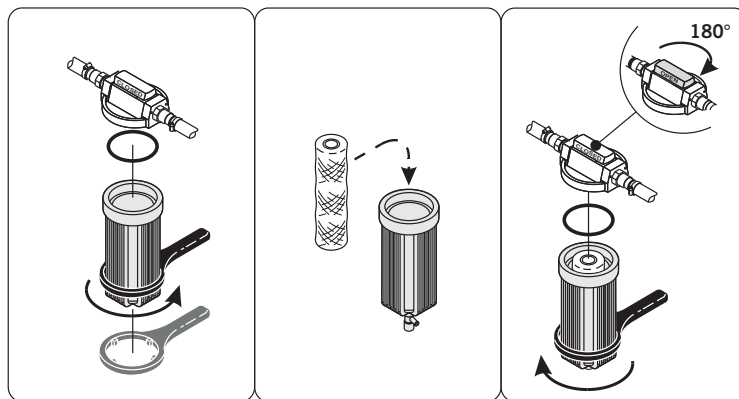


T32074

Mounting filter

Some models only.

Install the filter insert(s) enclosed in the installation kit. The filter(s) are placed underneath the processor in the right side and mounted in a drawer unit for easy access.



T31557

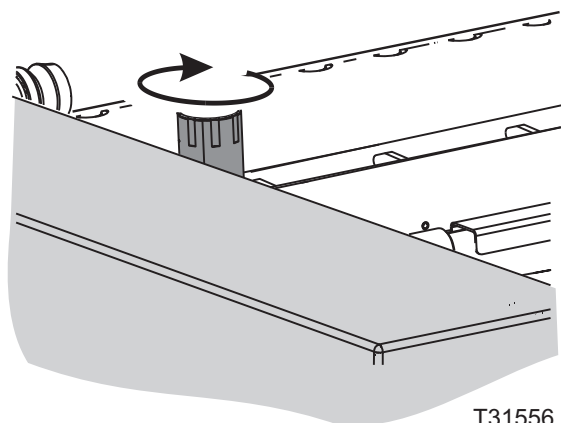
Filling up developer and wash

At the control panel under level set up define mode how the pump will operate:

- **Manual:** If the processor has low level by starting up, or goes low level during production, pump will be activated from Manual mode in the Tool box.
- **Confirm:** If the machine has low level by starting up, or goes low level during production, note on the display will ask to fill up. Filling up will start upon confirmation.
- **Auto:** If the machine has low level by starting up, or goes low level during production, the pump will start automatically filling up to level.

Developer

The processor is equipped with a fill-up pump for developer. If replenish and fill-up containers are installed as described earlier the processor will be ready for automatic fill-up when switched on. Make sure that the developer drain stand pipe is closed (see illustration).



T31556

Wash

Wash water recirculation system.

If the processor is equipped with a wash water recirculation system the wash section will fill up automatically when the processor is switched into stand-by mode.

No wash water recirculation.

The water solenoid valve will let in water when a plate is entered through the input slot.



OPEN



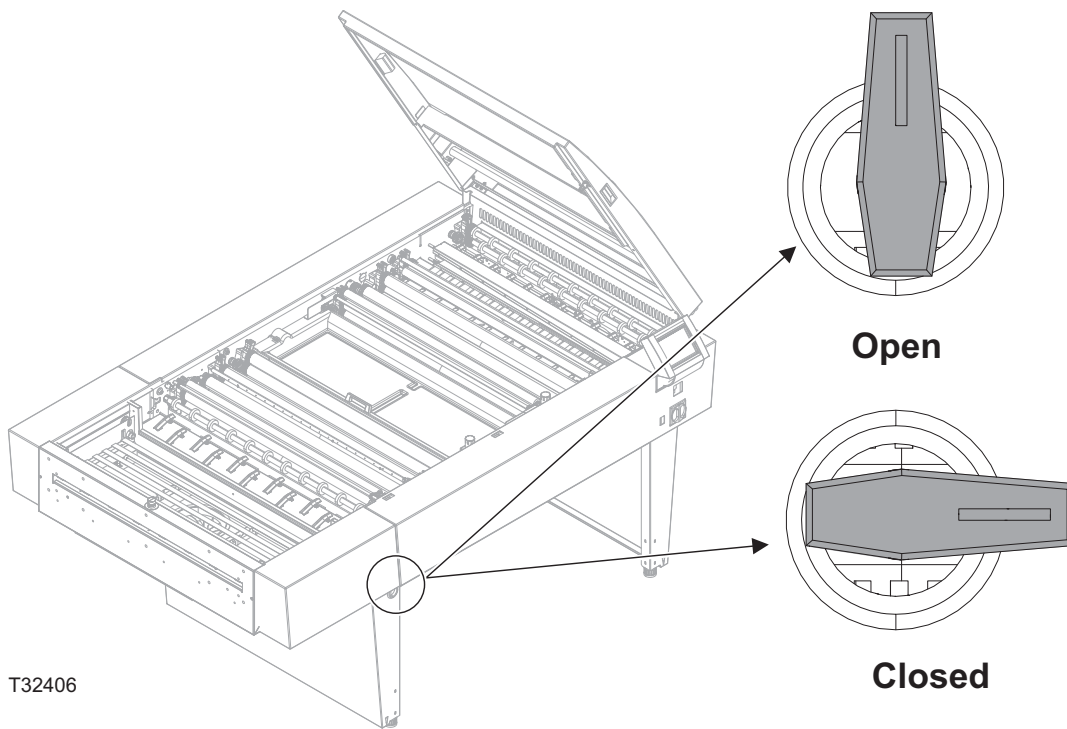
CLOSED

Pre-wash drain valve

Underneath the pre-wash section in the right side of the machine is mounted a ball valve for pre-wash drain.



If the processor is configured for pre-wash with running tap water the valve must always be in open position.



Finishing installation

Mounting panels

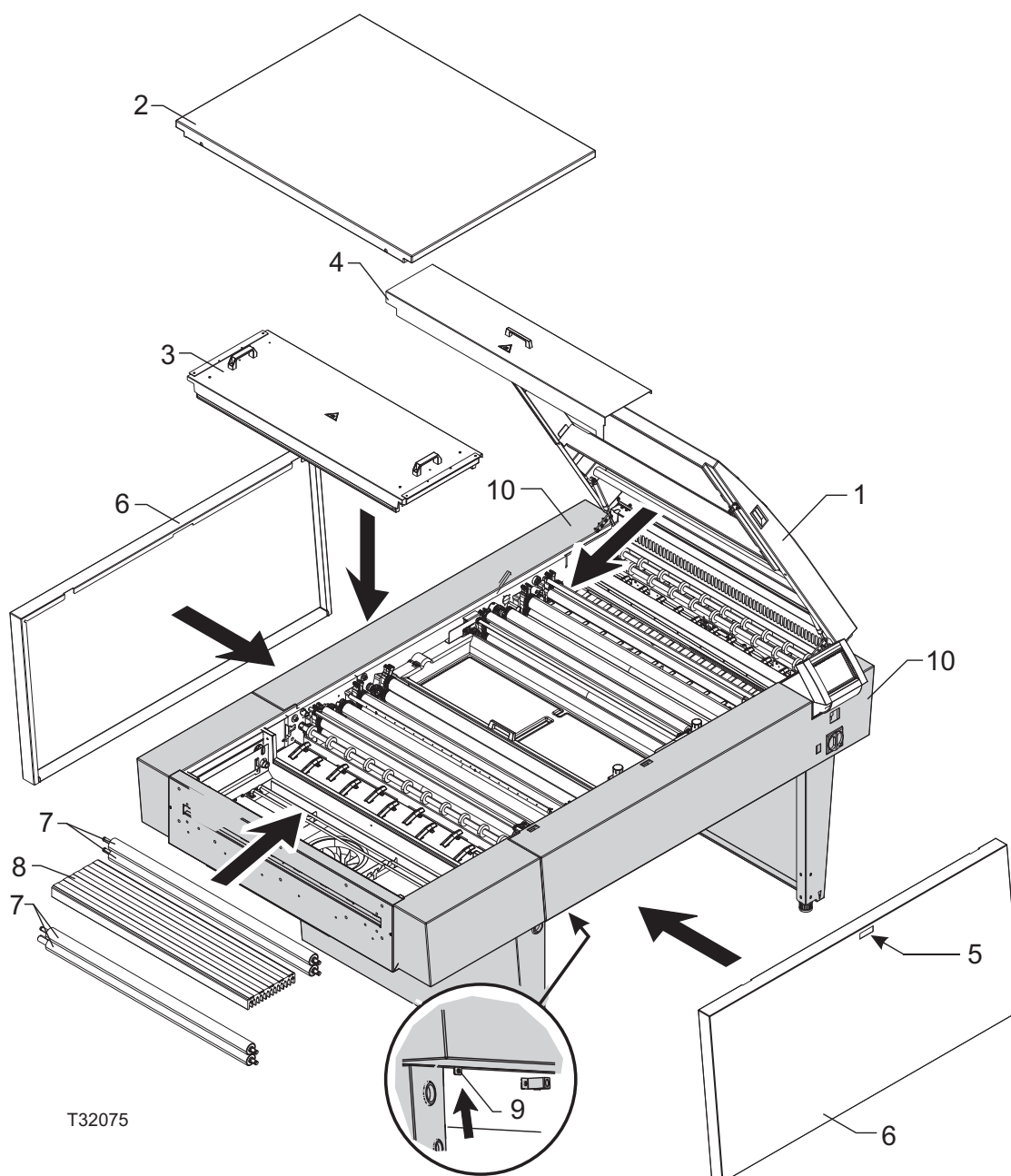
See illustration on the following page.)

- Install the pre-heat unit (8) and fasten it with the 4 screws. Install the rollers (7) from the pre-heat section.
- Mount the left and right stand panels (6) and secure them by closing the locks (5).
- Mount the pre-heat lid (3), the dryer lid (4), the pre-heat/pre-wash cover (2)
- Mount the left and right fenders (10) and secure them with the screws (9).
- Close the top cover (1).

Installation of setter interface

See the setter interface manual.


When installation of the setter interface is complete please return to this manual for finishing the entire installation by continuing with the instructions on the next page.



Initial start-up

When the processor has been properly installed, the initial start-up procedure can be carried out.

i Before starting make sure that developer replenishment container (7) is empty, or that the hose is disconnected.

- Open the water tap (1).
- Make sure that the developer fill container (6) and the gum container (9) are full.
- Turn on the processor with the main switch. The processor will initialize and then automatically switch to Ready mode.
- Press and hold  on the control panel for min. 3 seconds to switch the processor to Sleep mode.

! When the machine is started up for the first time after have stayed off for more than 72 hours the alarm appears:

High off repl .114

The amount of off repl. is high, maybe a chemistry change would be more appropriate.

- YES will start the replenish pumping.

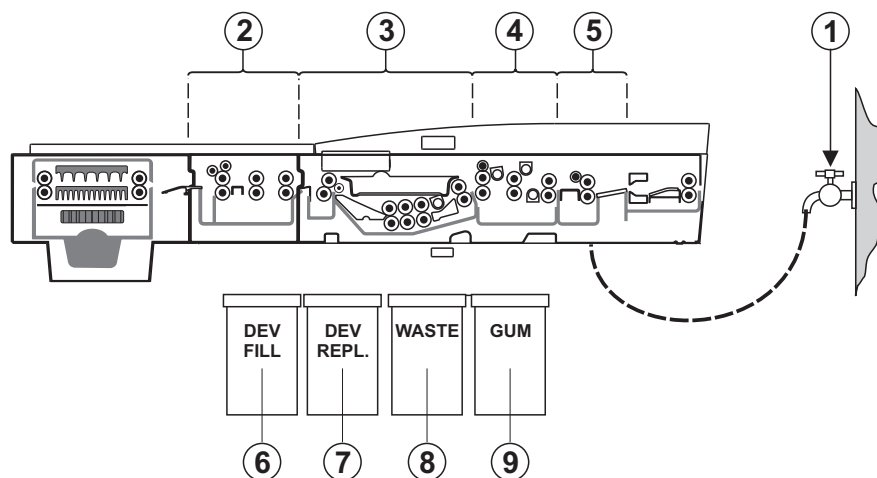
- NO will cancel the pumping.

Possible explanation:

The processor has been either off or in sleep mode for more than 72 hours.

Select NO otherwise the system will start replenishing based on how many hours the machine has been switch off since the machine has been packed.

- The prewash section (2), developer section (3), wash section (4), and gum section (5) will automatically fill up when the processor switches to Ready mode.
- Fill the developer fill container (6), developer replenishment container (7) and gum container (9).



T32150

Software service settings

The processor is configured from the factory. If however any extra features like level sensors for replenish containers etc. have been installed, an additional configuration is needed in order to adapt the software to the extra features.

Please refer to the **Software Manual "Control Panel Service Guide"** for detailed information of the procedures listed in the following.

Set control panel access level to "Service".

Configuration and settings

Additional configuration might be necessary to suit the individual customer needs. Make additional configuration in "**123** -> Configuration -> Hardware" and check all parameters.

Also make sure to check all parameters in "**123** -> Configuration -> Choices".

Calibration of valves and pumps

Pumps

Refer to "Calibration" in Part 4 in the Software Manual.

Setter interfaces

If the processor is installed as an online system, you should now install the setter interface as described in the Interface Manual.

Software user settings

A few adjustments of user program parameters are also needed before the installation is finished.

Please refer to Part 5 in the **User's Guide "Control Panel"** for information of the settings to be made before taking the processor into operation.

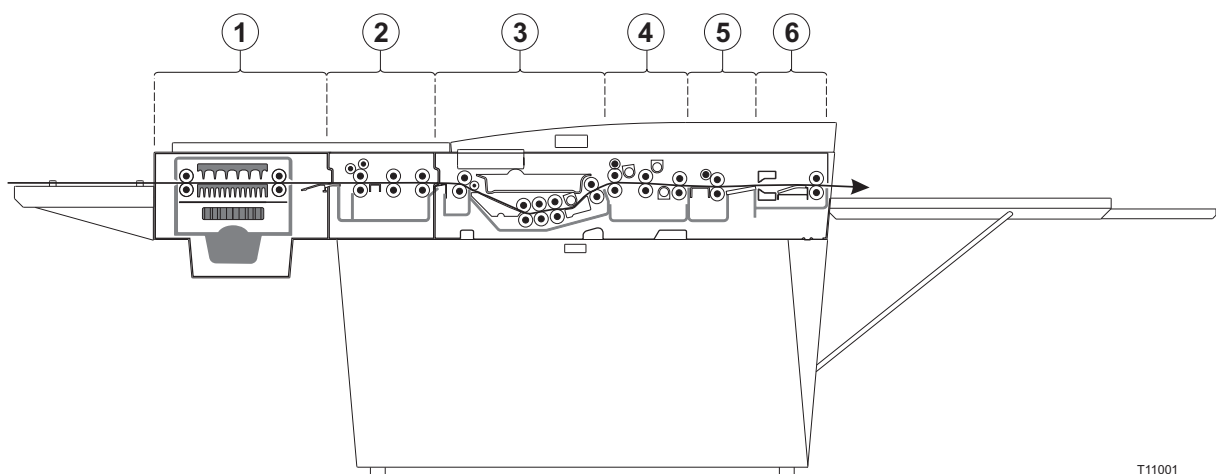
Part 3: Functional description

General

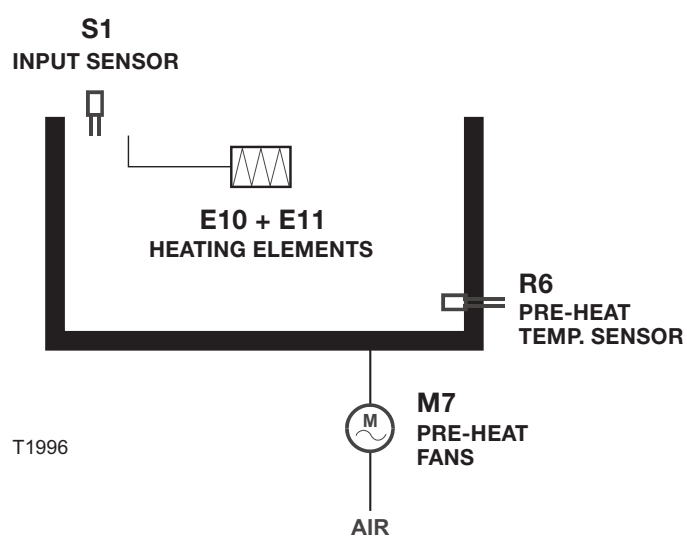
Processor sections

The processor contains six major sections, each performing a basic function to change the exposed plate into a fully developed and dry plate, ready for handling (see illustration below).

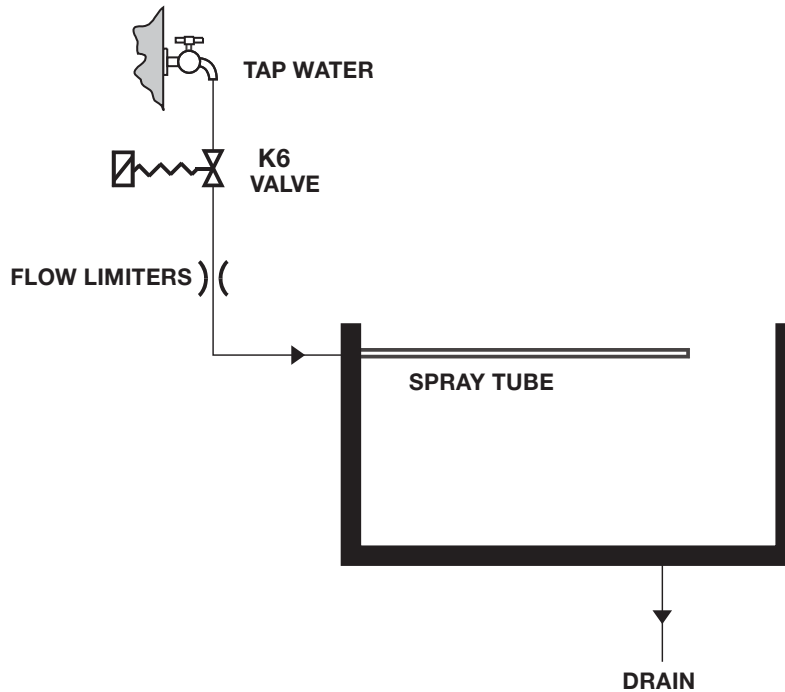
1	Pre-heat	Hardening of the emulsion of the exposed plate by circulation of hot air.
2	Pre-wash	Washing and brushing off the PVA-coating from the plate.
3	Developer	Developing of the plate and removing of the remaining unexposed/exposed emulsion.
4	Wash	Washing off the developer chemicals from the developed plate.
5	Gum	Application of a thin layer of gum onto the developed and washed plate to protect it from oxidation, dirt, fingerprints etc.
6	Dryer	Drying of the plate to ensure immediate handling of the plate. The processor sections are described in detail on the following pages.



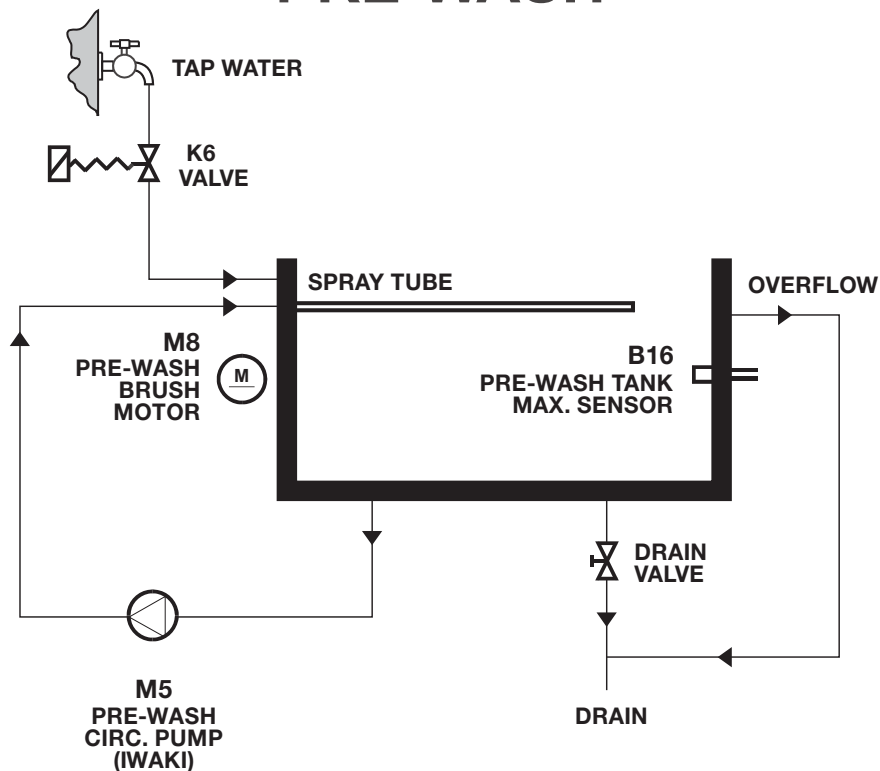
PRE-HEAT



TAP WATER PRE-WASH

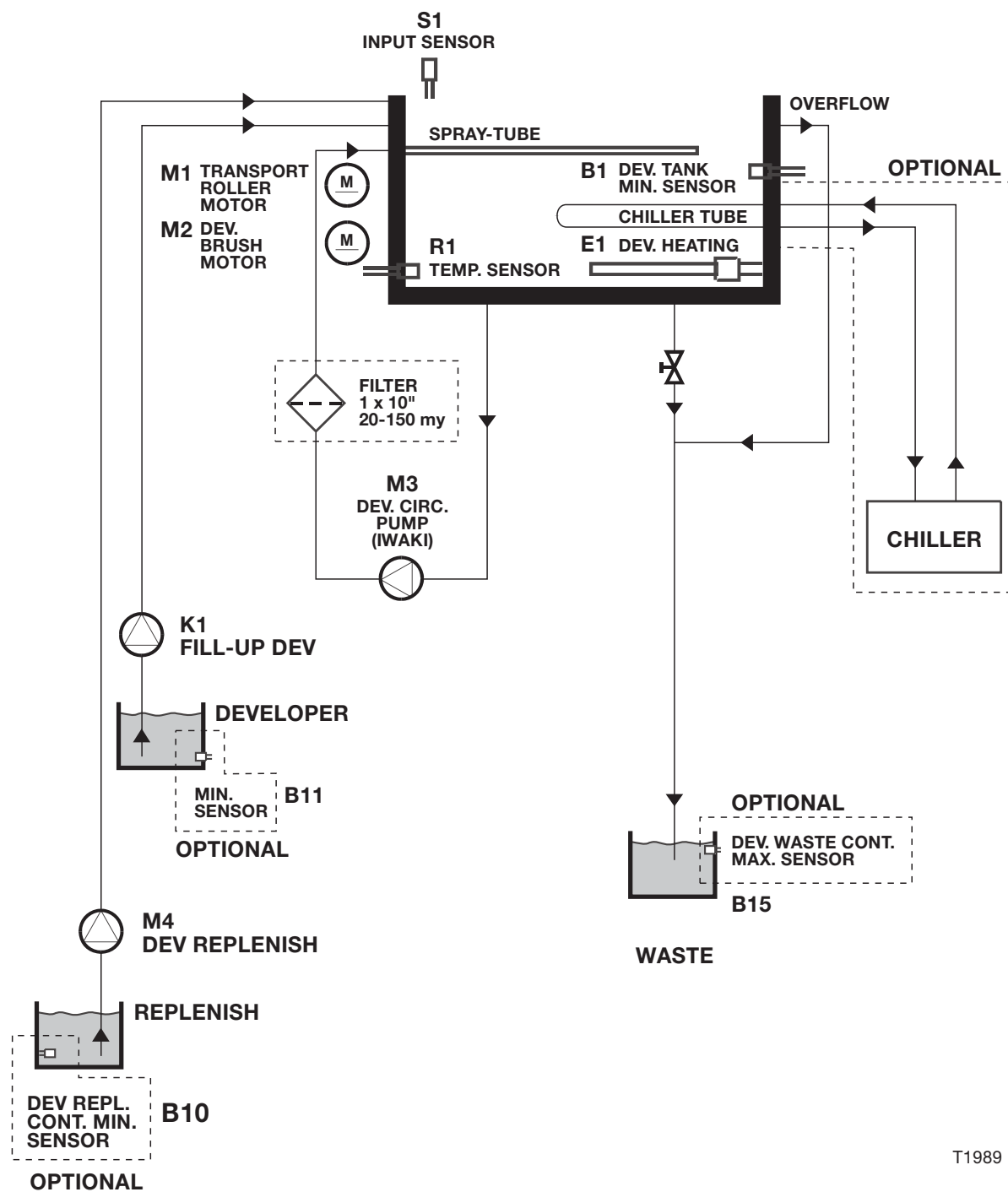


CIRCULATION WATER PRE-WASH



T1997

DEVELOPER



T1989 ...

Replenishment/anti-oxidation system

The replenishment system automatically adds fresh developer to the developer section to compensate for chemicals expended during processing and for lost activity caused by plate development.

The processor measures the plate size to determine the correct amount of replenisher for each plate.



Plate sizes must be entered in the "PLATE SIZES" menu in order to obtain exact calculation of replenishment.

Top-up replenishment

The top-up function can be set up to add fresh developer from the fill container to the developer section based on m² (ft²) of plates processed. Also the developer top-up function automatically adds fresh developer to the developer section when low level is detected.

Time replenishment

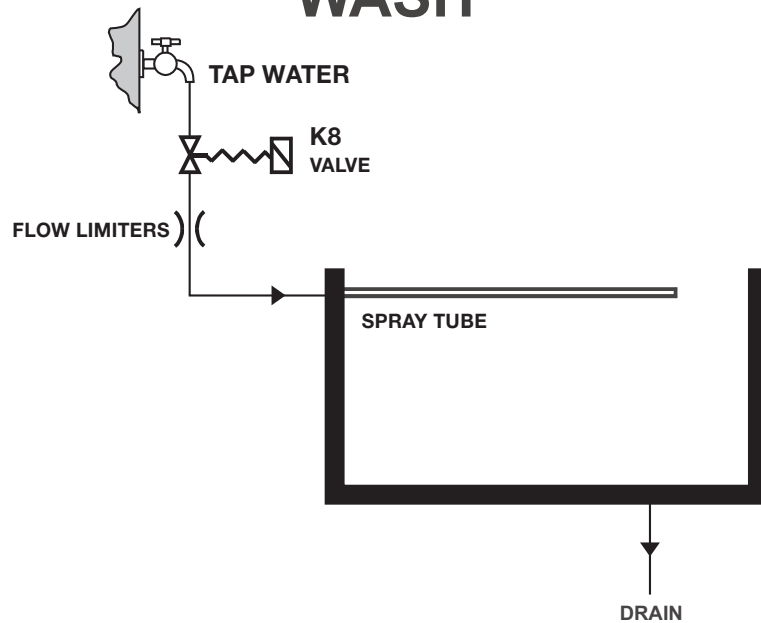
The time replenishment system adds fresh developer or replenish concentrate to the developer section to compensate for lost activity caused by oxidation and evaporation. The replenish amounts can be set individually for stand-by mode and off mode.

Off replenishment

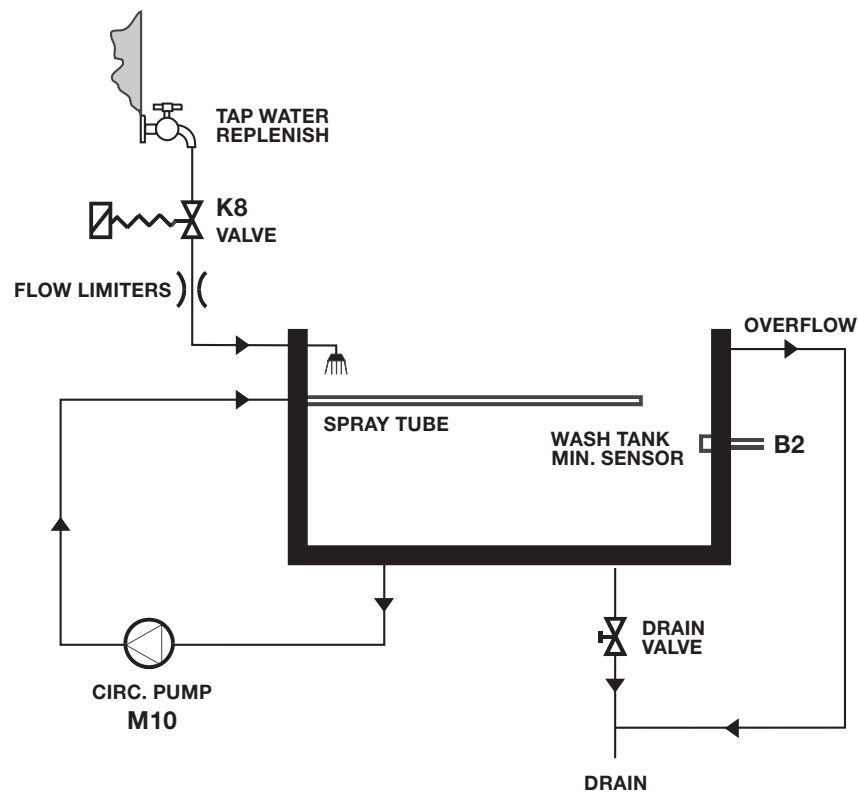
The replenishment system also features an "off replenishment" function which adds an amount of developer into the developer bath when the processor is turned on after being off for a long period.

The replenishment/anti-oxidation developer is added to the section by means of a pump.

TAP WATER WASH

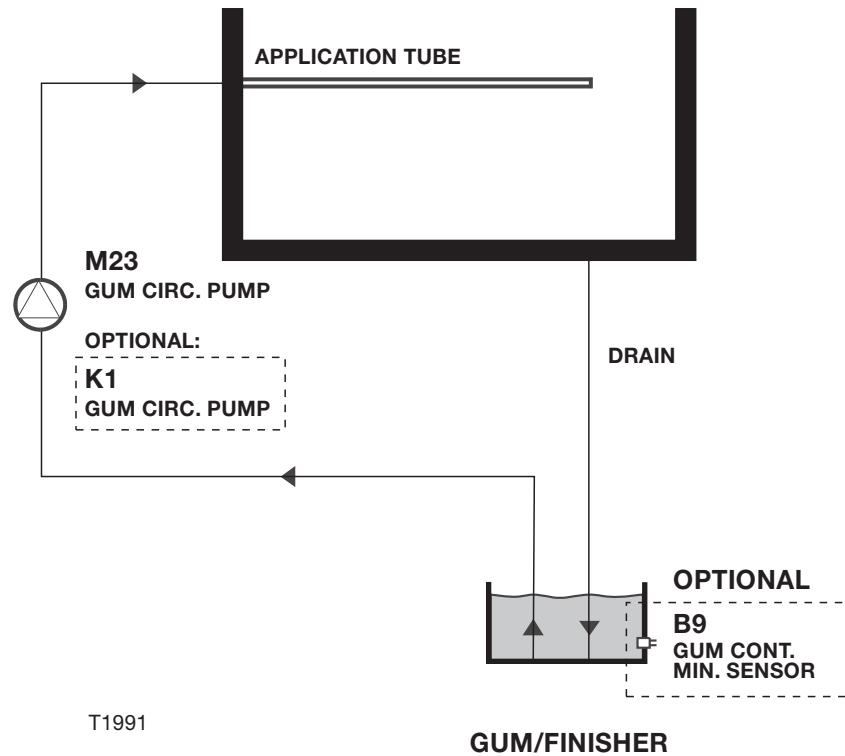


CIRCULATION WATER WASH

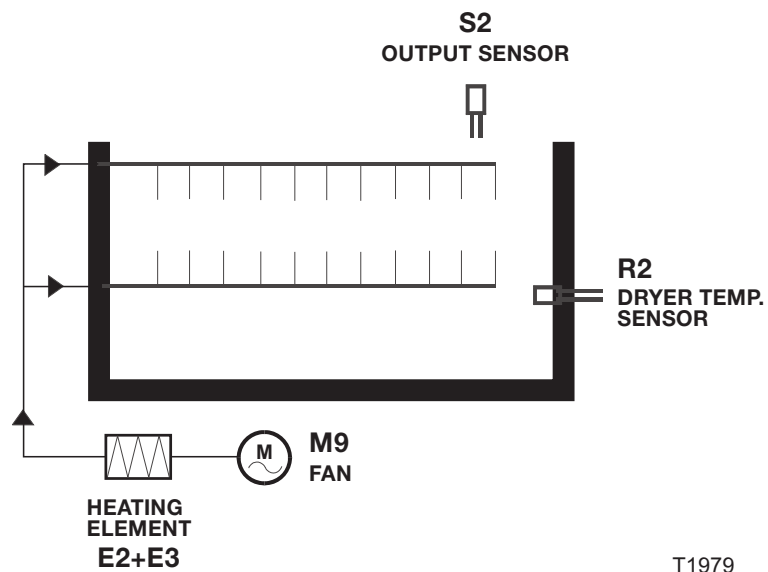


T1990

GUM



DRYER



Transport system

(See illustration below).

The plate is transported through the processor by a series of rollers and roller guides. The rollers are driven by a drive motor and a worm gear drive system.

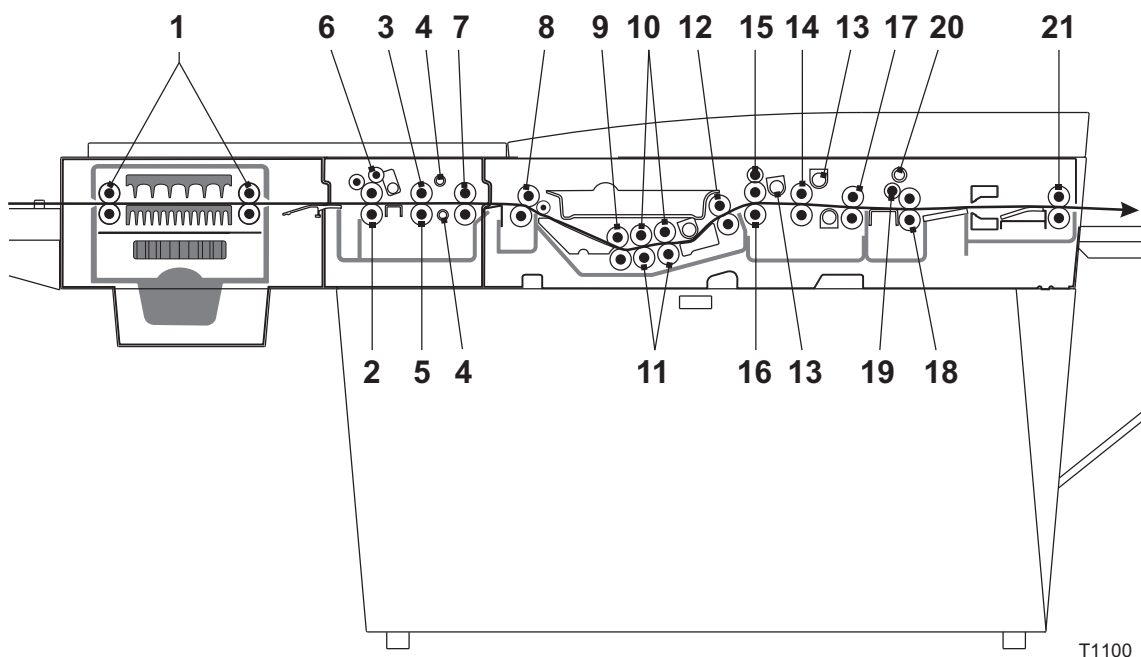
The pre-heat section rollers (1) transport the plate through the pre-heat section.

The first roller pair (2) in the pre-wash section leads the plate underneath the brush (3) (optional) and the spray tubes (4) wash the plate on both sides. The roller (5) makes sure of proper contact between brush and plate. The stop-roller (6) ensures that water does not run back into the pre-heat section. The rollers (7) at the section exit squeeze any residual water off the plate.

The rubber rollers (8) at the developer section entrance always run dry to ensure a homogeneous development. The rollers (9) ensure that the plate is transported correctly underneath the brushes (10) and the rollers (11) make sure of proper contact between brushes and plate.

The rollers (12) at the developer tank exit squeeze any residual chemicals off the plate. In the wash section the plate is washed on both sides by means of the spray tubes (13) and brushed on the upper side by means of the brush (14) (optional). The stop-roller (15) on top of the entrance rollers (16) prevents that the wash water runs back into the developer section, and water is squeezed off the plate by the section exit rollers (17). The gum section contains one roller pair (18) and a smaller roller (19) situated close to the upper roller. The gum solution from the application tube (20) forms a small bath between these two rollers and a thin layer of finisher is applied to the plate while the extra finisher is forced backwards.

The exit roller pair (21) takes the plate when dry and leads it out of the processor.



T1100

Electronic control

See illustration on the following page . The electrical control system consists of:

Master input/output unit (MIO)

The electrical control system is controlled by the MIO board via the SOM (System on Module).

There are two separate communication lines (buses):

- **GNUIB** for all internal communication in the processor (RS485).
- **ETHERNET** for Remote Enabling System.

The MIO-board is equipped with a platesetter interface for communication between the processor and platesetter.

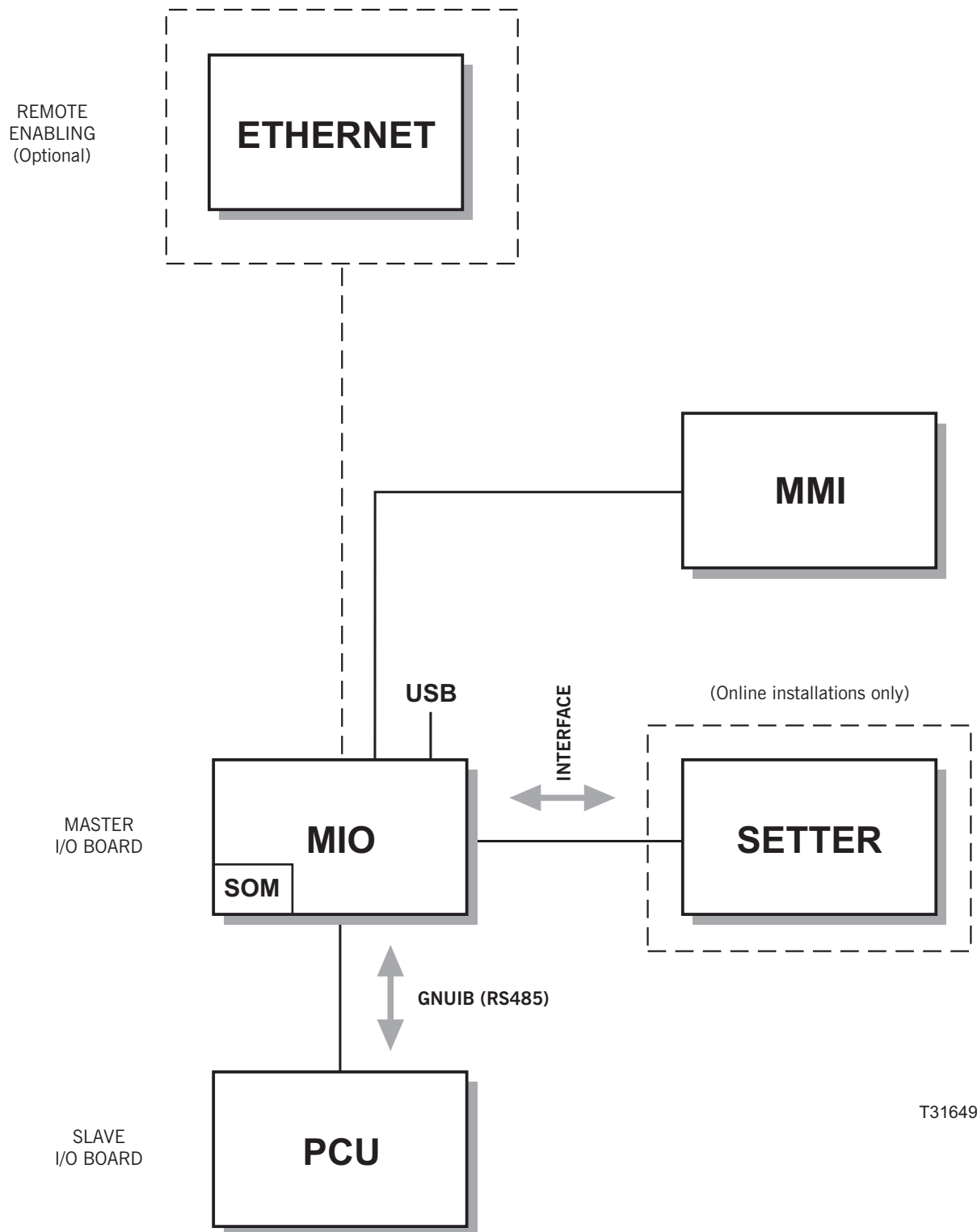
Power control unit (PCU)

The PCU-board holds all the high voltage in- and outputs for the control of heaters, motors etc.

Touch screen control panel (MMI)

A graphical user interface colour display. The processor is operated on the touch screen display. Control panel service information is described in the Software Manual.





Part 4: Maintenance

General

This section contains special service information such as fuse list and roller adjusting procedures etc.

For software related service information please refer to the separate "Software Service Information" manual.

WARNING!

Please note that where this label appears on the processor, electrical shock hazard still exists when the main switch is turned off.



ELECTRICAL SHOCK HAZARD

DISCONNECT ALL EXTERNAL POWER
SUPPLY BEFORE SERVICING

TO BE SERVICED BY AUTHORIZED PERSONNEL ONLY

RISQUE DE CHOC ÉLECTRIQUE

AVANT TOUTE INTERVENTION,
DÉBRANCHER TOUTES LES SOURCES DE COURANT

MAINTENANCE PAR PERSONNEL
AUTORISÉ SEULEMENT

WARNING!

When performing any service, maintenance, calibration, or trouble shooting etc. it may be necessary to override the function of the processor's interlock switches. In these cases please be aware that the processor's JOG-function may still be active making the drive system run idle at intervals.

Also be aware that the processor's heaters and motors will be in operation during the initial startup if you have overridden the machine's safety functions.

Safety checks



The described safety checks should be performed at least once a year.

Electrical

(Refer to the electrical diagrams in the back of this manual).

- **Check proper function of:**
 - Lid switch. Processor must stop when the switch is deactivated. The "COVER OPEN" message must appear in the control panel display.
 - Main switch. Processor must turn off when set to "0".
 - Emergency stop. The processor must turn off when activated.

Mechanical

- **Check proper function/location of:**
 - Side fenders, left/right. Make sure the fenders are properly secured with 2 screws each.
 - Lower side panels, left/right.
 - Top covers, front/rear.
 - Inner covers.
 - Covers, electronics boxes. Make sure covers are secured by screws.

Fuses

Fuses for motors are placed on the motors behind the left fender.

Other fuses for the various functions are located in the electronics cabinet behind the upper right fender. The fuses are placed on the fuse PCB behind the cover. A fuse label on the inside of the cover for the wiring box shows the position and rate of the fuses.



When changing a fuse, first switch off all power to the machine. Always ensure that the new fuse is of the correct rating according to the label.



The unit has double pole fusing!

See the table on the following page for a description of the fuses.

Fuse panel

Fuse	Fuse for	Type/Part no.
F1 - F6	Main power supply	15AT, 26508
F8	Emergency stop	6.3AT, 5 mm round 10049272
F10	Stacker	2AT, 6.3 x 32 mm 10057566

PCB PCU fuses

Fuse	Fuse for	Type/Part no.
F6	Dev. fill-up pump M11	1AT, 5 mm round 10011284
F7	Repl. pump	1AT, 5 mm round 10011284
F8	Gum pump	1AT, 5 mm round 10011284

Motor fuses

Fuse	Fuse for	Type/Part no.
F17	Transport motor M1	4AT, 6.3 x 32 mm 6896
F18	Brush motor M2	4AT, 6.3 x 32 mm 6896
F19	Prewash brush motor M8	4AT, 6.3 x 32 mm 6896

Cleaning

IMPORTANT!

Thorough cleaning of the processor tank interior, tank parts, pumps, filters etc. on a regular basis will minimize the risk of sediment build-up in and around vital parts of the equipment and prolong the lifetime of the equipment.

Cleaning accessories



Never use any hard tools or abrasive materials when cleaning any part of the processor.

Apron, rubber gloves and eye goggles.

For personal protection

Lint-free cloth, sponge and soft brush.

For cleaning of rollers, guides, tank walls, and all surfaces, especially the exit table and the feed table (if fitted).

Long-handled bottle brush and thin wire (i.e. Paper clip).

For cleaning the inside and the holes of the spray tubes.

Cleaning agents



Never use cleaning agents containing chlorinated solvents, acetic or phosphoric acid. These constitute a health hazard and could damage the processor.



Cleaning components with anything other than a mild detergent or a recommended cleaning agent may cause irreversible damage and invalidate any warranty.

Standard recommendations

Warm water 35-40°C (95-104°F).

For normal cleaning purposes and to rinse after using other cleaning agents.

Citric acid 10%/Nitric acid 5%

For major cleaning purposes.

Commercially available biocide/strong alkalic liquid

For cleaning off heavy algae-, fungal- or bacterial growth in the wash section.

Special recommendations

As some chemicals may require special cleaning agents, contact your chemicals supplier for recommendations about cleaning agents for your processor.

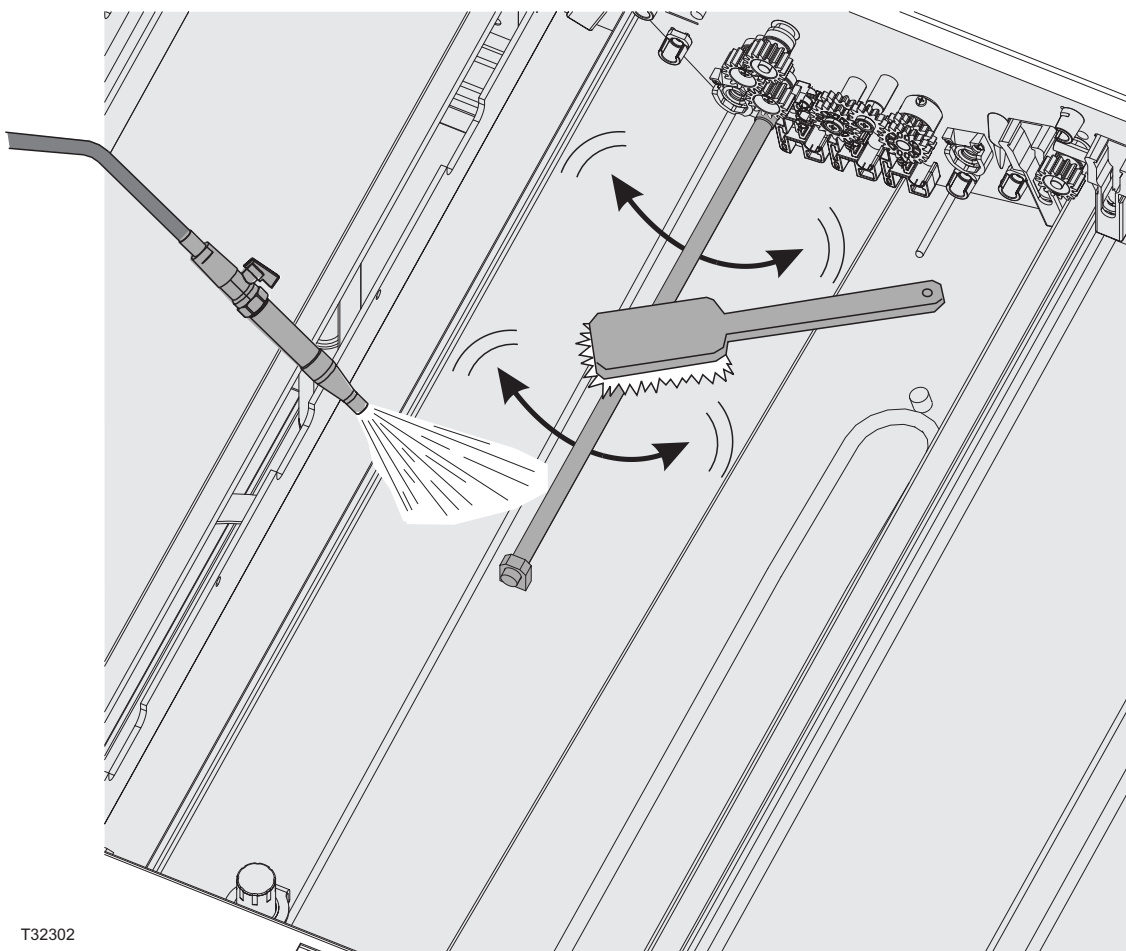
Cleaning of developer heating element

CAUTION!



Keeping the developer heating element and its surroundings clean, eliminates the risk of sediment build-up underneath the heating element, and eliminates the risk of heating damages of the tank.

When cleaning the tank, make sure to wash off all residues around the developer heating element. Use plenty of water, a soft brush and a soft cloth to clean the gap between the heating element and the tank bottom.
(See illustration below)



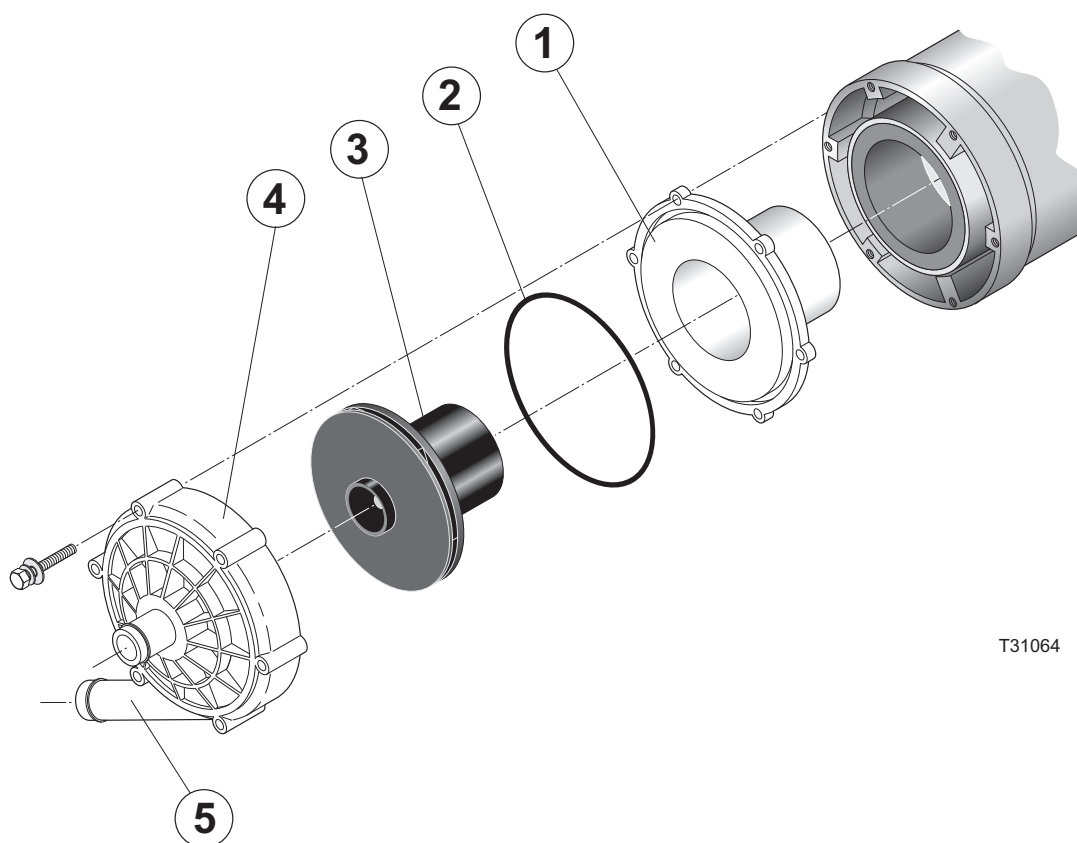
T32302

Cleaning of the circulation pumps

(See illustrations below)

If the circulation pump ceases to function properly clean the pump following this description.

- Cut off the power to the unit by removing the top cover.
- Empty the tank section.
- Dismount the hoses from the pump. Be careful not to spill the chemicals on the floor.
- Note the position of the outlet nozzle (5).
- Dismount the pump.
- Dismount the cover (4) and pull out the impeller (3) and the impeller housing (1).
- Clean the inside of the cover, the impeller and the impeller housing in warm water.
- Reinstall in reverse order, observing that the outlet nozzle (5) of the cover is placed as it was before dismantling it, and that the O-ring (2) is placed correctly in the groove of the impeller housing (1).

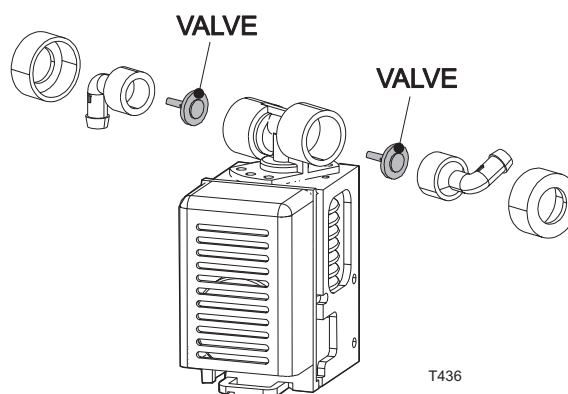


T31064

Cleaning of valves in the replenish pumps

If a replenishment pump ceases to function properly, run it with some warm water in order to clear the pump of chemicals.

If this does not help, take the pump apart and clean both of the small valves in warm water.



Adjustment of spray tubes

The pressure in the spray tubes can be adjusted to obtain the best possible application of water to the plate. Pressure is adjusted as shown on the illustration below.

The valve is fully open from the factory. Normally no adjustments are necessary.

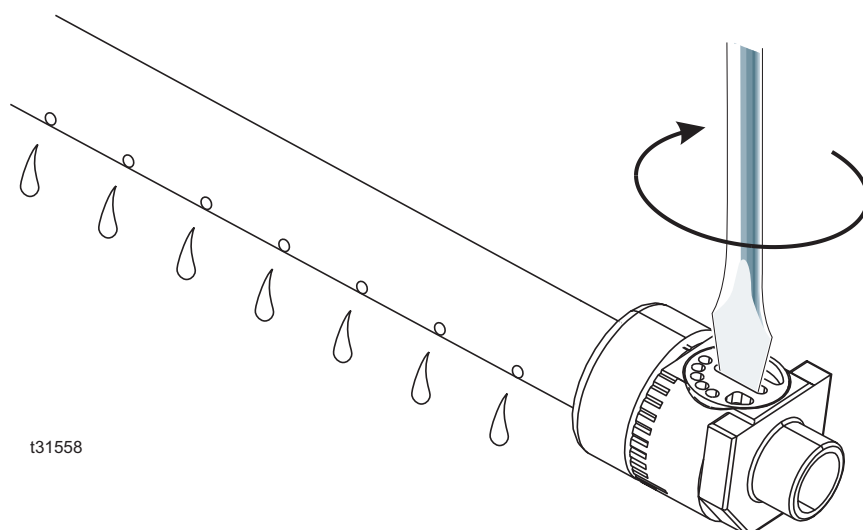
Cleaning of spray tubes

Developer section

Clean the spray tubes in the developer section with hot water to remove potential blocking of the holes.

Wash/Prewash section

Clean the spray tubes in the wash section with hot water to remove potential blocking of the holes. Occasionally, depending on the local water quality, it may be necessary to use a drill bit to clean the holes and remove sediments mechanically.

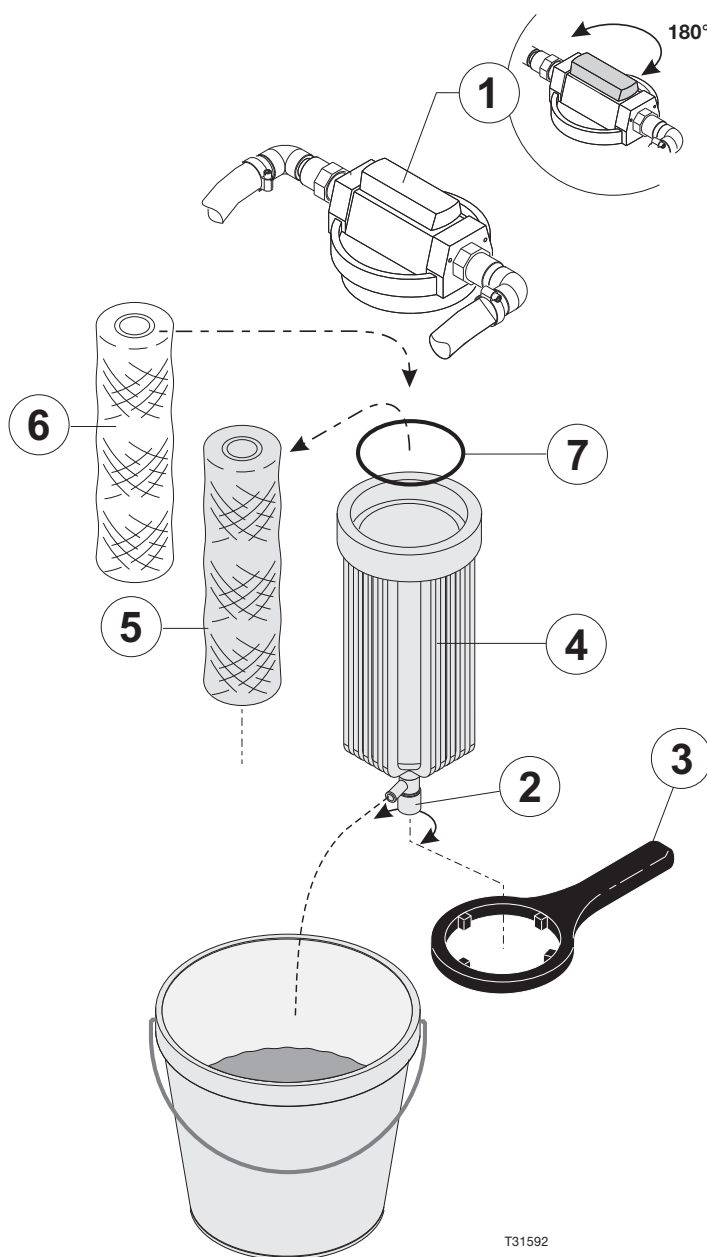


Changing filters

General

Clean the filter(s) regularly as described below:

- Close the valve (1).
- Open the drain valve (2) to empty the filter vessel (4) of chemicals.
- Loosen the filter vessel (4) by means of the filter key (3) and unscrew the vessel.
- Take the filter element (5) out and clean it in water or change with the new (6) whatever is necessary.
- Install the filter element (5) again.
- Mount filter vessel (4) and make sure the O-ring (7) fits properly into the groove in the filter vessel. Tighten with the filter key (3).
- Open the valve (1).

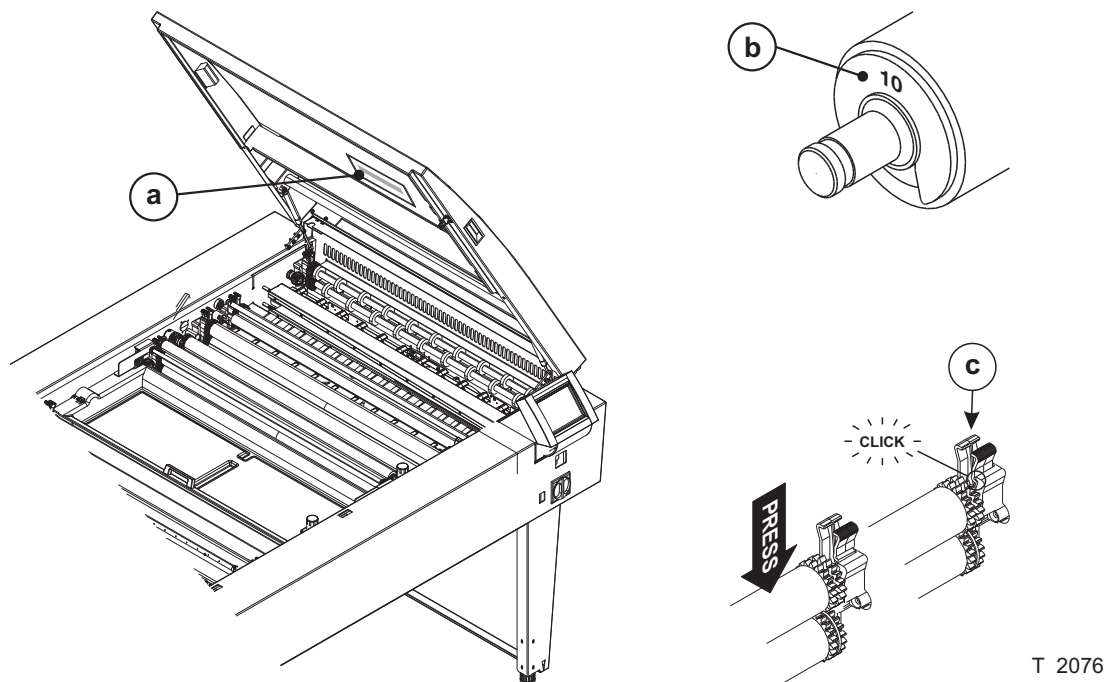


Rollers and brush rollers

General

On the top cover from inner side there is a label showing the roller configuration **(a)**. Each brush/roller is marked with a small number **(b)**. Install the rollers by referring to the roller numbers on the label.

Press down in each side on the upper rollers as indicated **(NB! Drive side first)** to lock them. When the roller bearings **(c)** “click” they are properly secured.

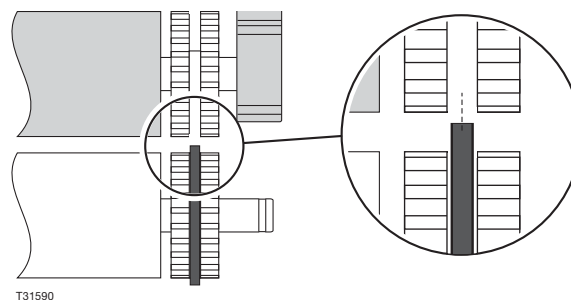


Installation of rollers

See illustration below.



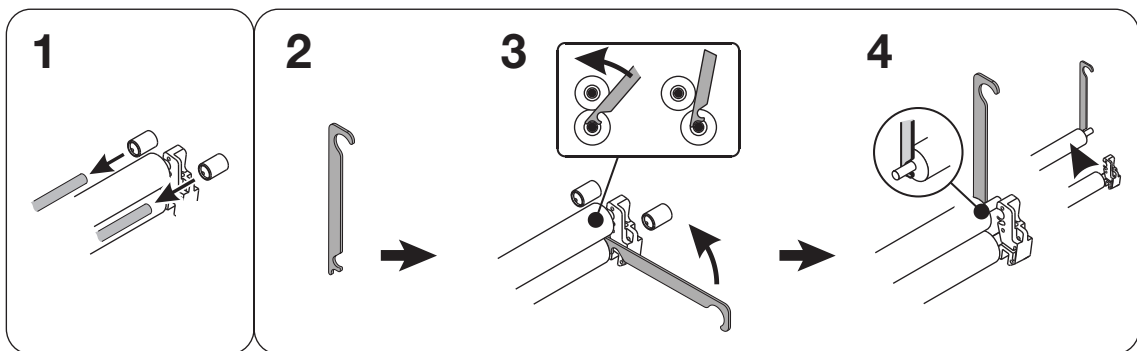
Make sure to align the gears on the upper and lower rollers. The gear on the lower rollers has a plate/guide that must fit into the gear of the upper rollers.



Removing brush rollers

Follow the instruction below:

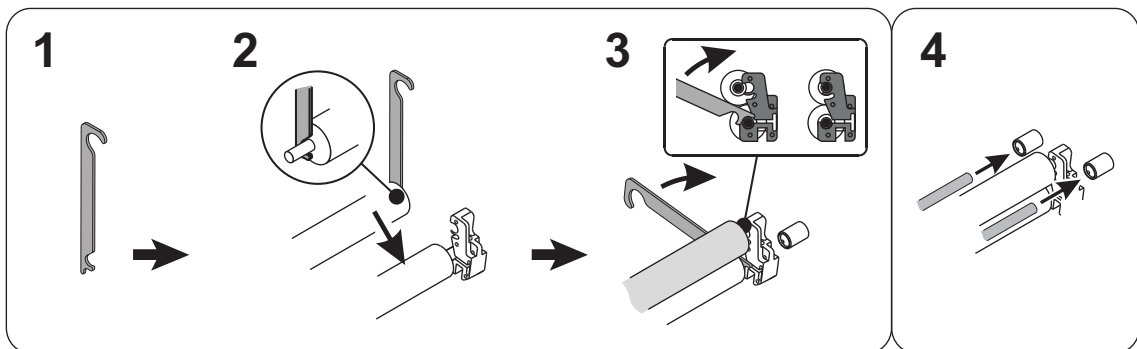
- Stand to the right of the processor.
- Remove the spray tubes from the developer section (1).
- Use the special tool (2) delivered with the processor when removing brush rollers.
- Insert the roller key between the upper brush roller and the lower support roller as shown (3).
- Lift up the roller key and force the upper brush roller out of the bearing.
- Use the roller key to lift up the brush roller end (4) out of the bath/tank.
- Repeat (3) and (4) for the gear end of the brush roller.



T31578

Installing brush rollers

- Inside the top cover is mounted a label showing the position of the rollers (page 3-4).
- Stand on the right side of the processor and hold the brush roller with both hands.
- Place the gear end of the brush roller on the gear of the support roller in the left side of the tank wall.
- Use the roller key (1) to lower the right end of the rollers into the bath/tank (2).
- When mounting upper roller insert the roller key between the upper roller and the lower roller as shown (3).
- Press the upper roller into the bearing by pressing the roller key upwards (3).
- Repeat (2) and (3) for the gear end of the brush roller.
- Mount the spray tubes (4).



T31579

Adjusting the brushes

General

The following describes a standard adjustment for the brushes in the prewash*, developer and wash* sections (* = not all models). The brush adjustment can vary from one processor to another since it must apply to the specific plate and chemical type etc.

Tools:

- 5 mm hex T-key
- Test plate 100 x 200 x 0.15 mm (developed)

Processor conditions

The processor must be running and ready to process.

Set developer brush speed according to recommendations from the plate manufacturer.

Preparations

See the illustration on the following page.

- Open the processor top cover.
- Remove the upper roller (1) in the developer section and activate the interlock switch (2).

Adjustment - method A

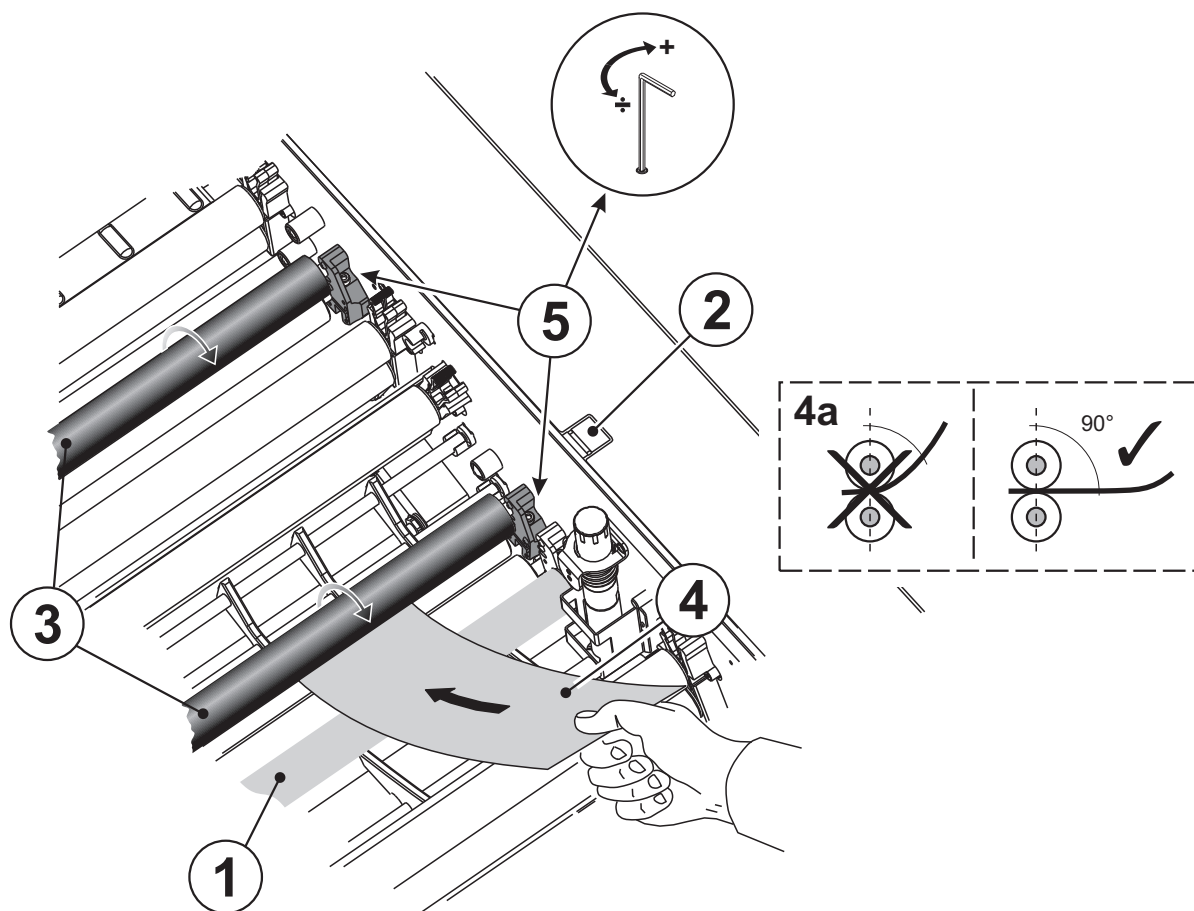
- While the brush (3) runs use the test plate (4) to test the brush pressure in both sides and in the middle. Make sure that the test plate (4) is entered at right angles (4a) to the rollers.
- Adjust the brush pressure on the screws (5) (clockwise = tighten) until you feel a slight grip ("kiss'n touch"). Make sure that you obtain a uniform grip in both sides and in the middle.
- From this point turn the screws (5) 1/4 turn clockwise in each side. 1/4 turn is a common pressure which will work in most occasions. Please refer to plate manufacturer's specifications.

Adjustment - method B

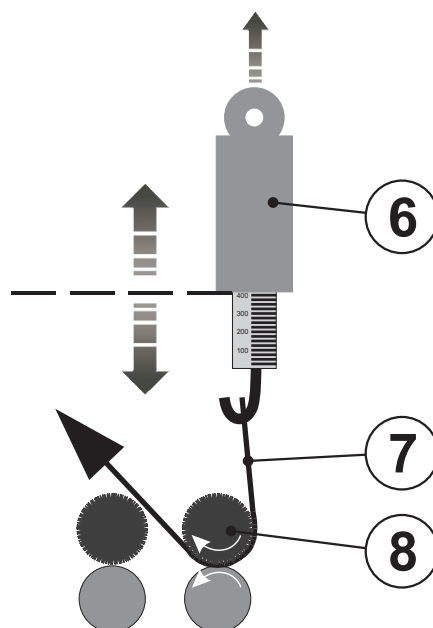
Use a strip of film and a spring balance and proceed as follows:

- Fill the tank with water.
- Insert a strip of polyester film (7) (10 cm wide, approximately 50 cm long, 0.10 mm thick/4 x 20 x 1/128") (6) between the brush roller (8) and the lower roller (or pressure plate).
- Activate the brush drive (120 rpm) and hold the film strip with the spring balance (7) against the rotation of the brush, pulling the spring balance upwards.
- Adjust the pressure to a balance depending on a recommendation from plate manufacturer over the entire brush roller width.
- Repeat the procedure for the other developer brush roller and the brush rollers in the prewash and rinse section. All brushes should be adjusted to the same settings.

Adjustment - method A



Adjustment - method B



T31942

Adjustment of gears for wash brush

Important!



When the main drive shaft has been dismantled/remounted due to change of parts, service checks, etc. it is very important to make a final adjustment according to the description below.

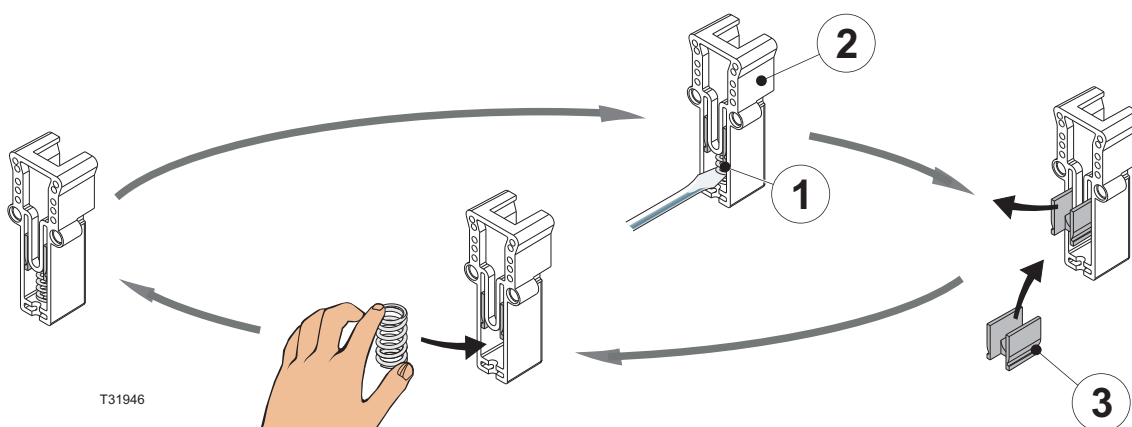
Procedure of adjustment

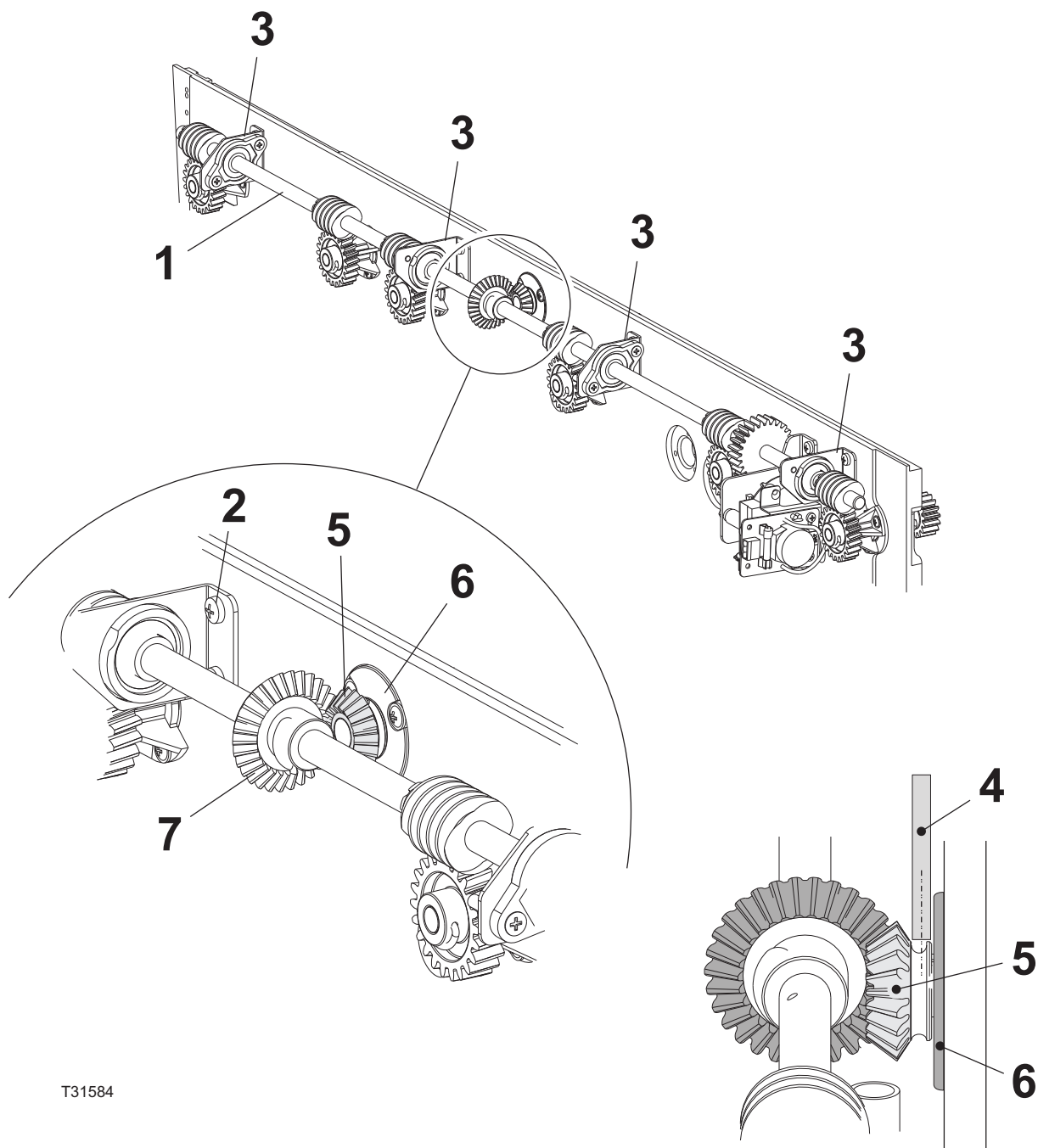
See illustration on the following page.

- Mount the main drive shaft (1) on the tank wall and tighten the 2 screws (2) on each of the 4 brackets (3) holding the shaft.
- Loosen the screws (2) on each bracket (3) 1/4 turn.
- Place a 0.5 mm feeler gauge (4) between the gear (5) and the bearing (6).
Alternatively use pieces of offset plate equal to 0.4 mm - 0.6 mm (e.g. 2 x 0.3 mm offset plate).
- Turn the gear (7) manually to adjust the space gap between the gear (5) and the bearing (6) to fit the feeler gauge (4).
- Tighten the screws (2) on the brackets (3) for the main drive shaft.
- Remove the feeler gauge (4).
- Finally make sure that the adjustment has left a small gap between the gears (5) and (7).

Replacement of bearing bush

- Remove the spring (1) from the roller bearing (2) by using screwdriver.
- Replace the bearing bush (3).
- Compress the spring and insert it into the roller bearing as shown in the illustration.





T31584

Preventive Maintenance Kit Program

To ensure continues high quality and maximize productivity and processor up-time, it is recommended to carry out preventive maintenance at regular intervals.

To facilitate this a Preventive Maintenance Program has been developed, consisting of a number of relevant service-parts to be replaced at specific service intervals.

It is recommended that the following Preventive Maintenance Kits are implemented, at the mentioned intervals, at which point the cycle will start over.

- Minor Preventive Maintenance at 500 production hours or every year what comes first.
- Medium Preventive Maintenance at 1000 production hours or every year what comes first.
- Minor Preventive Maintenance at 1500 production hours or every year what comes first.
- Major Preventive Maintenance at 2000 production hours or every year what comes first.



Please refer to the Spare Parts manual for order numbers for particular kits.



Read more about our Preventive Maintenance Kits on www.glunz-jensen.com and see the content of the Preventive Maintenance Kits - or contact us at order-department@glunz-jensen.com.

Part 5: Trouble shooting

General

If the processor does not work properly, refer to the following pages to find the paragraph that comes closest to your problem.

The troubleshooting guide is divided into two sections:

a. Problems with the processor

b. Problems with the processed material

For information about alarm messages see the "Control Panel" manual. For cleaning and maintenance subjects see the processor user manual. For information about fuses see page 4-2.

Use the test function via the touch screen control panel (MMI) in the processor's sleep mode. See the control panel Quick Guide.

The electrical diagrams are located in Appendix A.



To change a fuse, switch off all power to the machine first. Always ensure that the new fuse is of the correct rating according to the diagram.

WARNING!

When performing any service, maintenance, calibration, or trouble shooting etc. it may be necessary to override the function of the processor's interlock switches.

In these cases please be aware, that the processor's JOG-function is still active, making the drive system run idle at intervals.

There will be NO advice when the JOG function starts.

Also be aware that the processor's heaters and motors will be in operation during the initial startup if you have overridden the machine's safety functions.

Before starting trouble shooting

Important!

Plates and chemicals are very sensitive materials and correct storage is vital to obtain a satisfactory production result. Incorrect storage may very well result in unsatisfactory processing quality etc.

Contact your local supplier for information about storage requirements for plates and chemicals.



Before making adjustments of the equipment make sure that incorrect storage of plates and chemicals can be excluded.

Problems with the processor

SYMPTOM	PROBABLE CAUSE	REMEDY
<i>NO FUNCTION ACTIVE</i>	<ul style="list-style-type: none"> • Mains switch turned off or power cable not connected to main power outlet. • Fuse(s) blown. 	<ul style="list-style-type: none"> • Connect cable to main power outlet and/or turn main switch on. • Replace fuse.
<i>PROCESSOR CANNOT INITIALIZE</i>	<ul style="list-style-type: none"> • Configuration error. (If main power has been cut off temporarily the processor switches to off mode - green led flashes). • Defective PCB. • Cables not properly connected. 	<ul style="list-style-type: none"> • Reload software. • Replace PCB. • Check cables and make proper connections.
<i>MACHINE WILL NOT START UP</i>	<ul style="list-style-type: none"> • MMU-PCB defective. 	<ul style="list-style-type: none"> • Replace defective part.
<i>MACHINE DOES NOT START WHEN A PLATE IS INSERTED</i>	<ul style="list-style-type: none"> • Input sensor(s) defective. 	<ul style="list-style-type: none"> • Replace defective sensor.
<i>NO WASH WATER ALTHOUGH MACHINE IS IN "PROCESS" MODE</i>	<ul style="list-style-type: none"> • Water tap closed. • Water solenoid valve defective. • Water solenoid valve filter clogged. • Processor with filter: Filter valve closed. • Processor with level sensor: Level sensor in wash dirty or defective. • Electronics defective. 	<ul style="list-style-type: none"> • Open water tap. • Replace valve. • Clean filter. • Open valve. • Check sensors and clean/-replace whatever is necessary. • Replace defective electronics.

SYMPTOM	PROBABLE CAUSE	REMEDY
DRYER BLOWER WORK, HEATER DOES NOT	<ul style="list-style-type: none"> • Fuse(s) blown. • Temperature sensor defective. • Heating element defective. • Electronics defective. 	<ul style="list-style-type: none"> • Replace fuse. • Replace temperature sensor. • Replace heating element. • Replace defective electronics.
DRYER BLOWER DOES NOT WORK	<ul style="list-style-type: none"> • Fuse(s) blown. • Blower defective. • Electronics defective. • Capacitor defective. 	<ul style="list-style-type: none"> • Replace fuse. • Replace blower. • Replace defective electronics. • Replace capacitor.
NO GUM ALTHOUGH MACHINE IS IN "PROCESS" MODE	<ul style="list-style-type: none"> • Gum container empty. • Gum hose blocked. • Pump valves blocked or defective. • Pump defective. • Fuse(s) blown. • Electronics defective. 	<ul style="list-style-type: none"> • Refill container. • Clean hose. • Clean or replace valve. • Replace pump. • Replace fuse. • Replace defective electronics.
GUM PUMP RUNS BUT NO FINISHER (NO ALARMS)	<ul style="list-style-type: none"> • Gum hose blocked. • Pump valves blocked or defective. 	<ul style="list-style-type: none"> • Clean hose. • Clean or replace valve.
DEVELOPER REPLENISHMENT PUMP DOES NOT WORK	<ul style="list-style-type: none"> • Fuse(s) blown. • Pump defective. • Electronics defective. • Wrong configuration 	<ul style="list-style-type: none"> • Replace fuse. • Replace pump. • Replace defective electronics. • Re-configure the processor.
DEVELOPER REPLENISHMENT PUMP RUNS BUT NO REPLENISHMENT	<ul style="list-style-type: none"> • Replenishment hose blocked. • Pump valves blocked or defective. • Replenish container empty. 	<ul style="list-style-type: none"> • Clean hose. • Clean or replace valves. • Refill container.
REPLENISHMENT SYSTEM DOES NOT WORK ALTHOUGH THE MACHINE IS IN "PROCESS" MODE	<ul style="list-style-type: none"> • Replenishment parameters settings not correct. • Electronics defective. 	<ul style="list-style-type: none"> • Make correct settings. • Replace defective electronics.
NO DEVELOPER CIRCULATION	<ul style="list-style-type: none"> • Replenish container empty. • Fuse(s) blown. • Processors with filter: Filter clogged. • Processors with filter: Filter valve closed. • Developer circulation pump defective. 	<ul style="list-style-type: none"> • Fill replenish container. • Replace fuse. • Replace filter insert. • Open valve. • Replace pump.

SYMPTOM	PROBABLE CAUSE	REMEDY
<i>NO WATER CIRCULATION</i>	<ul style="list-style-type: none"> • Pump defective or clogged. • Water filter clogged. • Water spray bar clogged. • Fuse blown. • Level sensor in wash dirty or defective. 	<ul style="list-style-type: none"> • Clean and/or repair pump. • Replace filters. • Clean spray bar. See Part 3. • Replace fuse. • Check sensor and clean/-replace whatever is necessary.
<i>ROLLER DRIVE MOTOR RUNS, BUT NO PLATE TRANSPORT</i>	<ul style="list-style-type: none"> • Drive gears and/or worms defective. 	<ul style="list-style-type: none"> • Check all gears and worms gears on rollers, and make sure they move freely. Replace any defective part.

Problems with processed material

SYMPTOM	PROBABLE CAUSE	REMEDY
<i>PLATE IS NOT COMPLETELY DRY</i>	<ul style="list-style-type: none"> • Dryer temperature is set too low. • Gum section applying too much gum. • Dryer section is malfunctioning. 	<ul style="list-style-type: none"> • Set dryer temperature a little higher. • Check gum section. • Check dryer section.
<i>PLATE HAS STRIPES LENGTH-WISE OR CROSSWISE</i>	<ul style="list-style-type: none"> • Defective or dirty rollers or guides. • Wash spray tubes clogged. 	<ul style="list-style-type: none"> • Take rollers and/or guides out, inspect and wash them. Rollers with dents or other marks must be changed. • Clean the spray tubes. See Part 3.
<i>WASHING NOT SUFFICIENT</i>	<ul style="list-style-type: none"> • Spray tube clogged. • Brush not turning. • Brush pressure not sufficient. • Water circulation pump does not run. • Rollers dirty in wash section. 	<ul style="list-style-type: none"> • See earlier in this chapter. Clean spray tube. • Check the brush and fix the problem. • Adjust brush pressure. • See "Cleaning of the pumps" in Part 4. • Clean rollers.
<i>PLATE HAS AN UNEVEN GUM</i>	<ul style="list-style-type: none"> • Gum container nearly empty. • Gum rollers dirty. • Gum distributing roller not in place. • Gum pump clogged. 	<ul style="list-style-type: none"> • Refill container. • Take rollers out and clean them. • Correct the placement of the roller. • Take pump apart and clean valves.

Appendix A: Electrical diagrams

This chapter includes all electrical diagrams for the processor.

The diagrams (4 pages) cover:

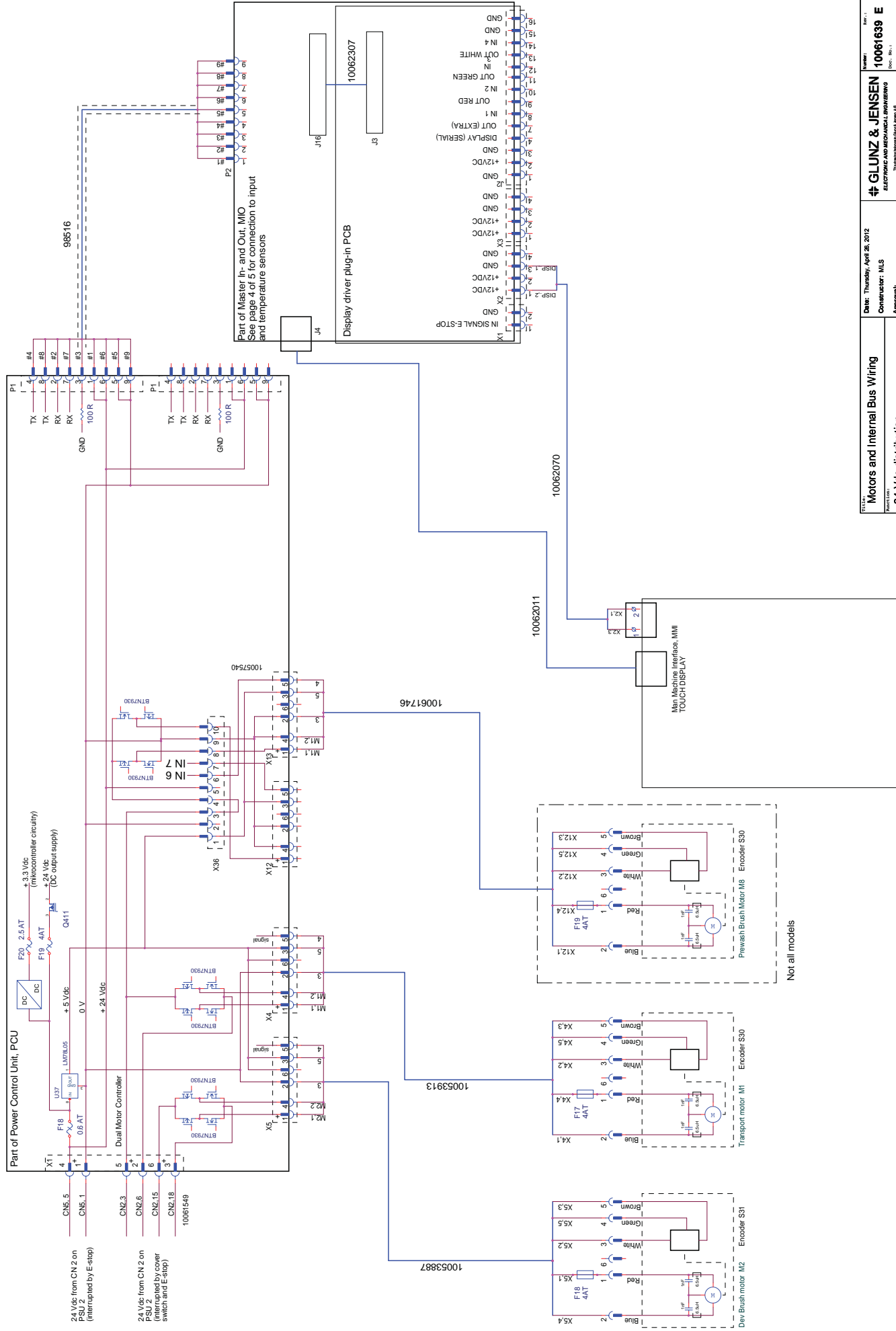
- Page 1 of 4:
Main power distribution
Fuse panel and interlocks
- Page 2 of 4:
Motors and internal bus wiring
- 24V DC distribution
- Page 3 of 4:
Primary wiring
- 230V AC control devices
- Page 4 of 4:
Low voltage wiring
- Sensors and control devices

Main power distribution

Fuse panel and interlocks

Motors and internal bus wiring

24V DC distribution



Primary wiring

230V AC control devices

Low voltage wiring

Sensors and control devices

